VOL. 14 NO. 6 APRIL 2017 www.civilsocietyonline.com .com/civilsocietyonline ₹50

Civil Society

KERALA'S GI HUNTERS

New stardom for
Chengalikodan banana
Pokkali rice
Travancore jaggery
Valakkulum pineapple

Dr C.R. Elsy, who heads the IPR Cell of the Kerala Agricultural University

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COVER STORY

Kerala's GI hunters

Traditional fruits, tubers and crops are on their way to newfound fame and geographical indicator status thanks to the dedicated efforts of the IPR Cell at the Kerala Agricultural University. 18

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Civil Society
READ US. WE READ YOU.

The GI dividend

THE small IPR Cell at the Kerala Agricultural University does all of us proud. The dedication with which it has pursued geographical indicators is a great example of what should be done across the country. The enormous genetic wealth that India has is inadequately assessed. And for what has been identified, not enough is done to protect it in the marketplace globally and domestically. There are diverse fruits, vegetables and crops, grown and preserved by communities. They should be documented for their uniqueness. It is primarily a scientific task but it won't do to stop there. Social, legal and commercial initiatives are also needed. At the Kerala Agricultural University, multiple efforts have come together in a spirited way. It is great work, but will survive and multiply only if supported by a national sense of mission to work for the prosperity of communities by helping them protect and use natural resources together with traditional knowledge and practices.

Any bazaar in India is a showcase for a brilliant range of produce. An opportunity exists to help growers realise the value of what they have and leverage it sustainably in a connected world. The biodiversity law has unfortunately done little to help, bogged down as it is in bureaucratic thinking and procedures. It needed to have been simpler and better aligned to the realities of rural India. It wouldn't be a bad idea to junk it and start again and this time go bottom up in enlisting the experience needed to have a lithe regulatory system.

We spent some time early in the month in conversation with Anurag Behar, Vice-Chancellor of the Azim Premji University. We've known the university and the Azim Premji Foundation for several years now. We find their work serious and meaningful. At a time when universities are sprouting all over India for what look like dodgy reasons, the Azim Premji University stands out for the contribution it seeks to make to nation building. Its focus is on the social sector and development. It is non-commercial in its orientation. The university has completed five years, and since *Civil Society* was the first to report on it when it was being set up, we thought we should speak to Behar on how the journey has been.

We also spent time with Professor Santosh Mehrotra for an illuminating interview on the complexities of India's demographic dividend. Is having so many young people going to be an advantage or a liability? Are they getting the education that will get them jobs? Are efforts at skilling them purposeful and designed to meet the needs of industry? Will the lack of healthcare and nutrition be a limitation? Prof Mehrotra is a scholar who stays close to the ground. He has done a book on the demographic dividend which should be read widely.

In our search for socially relevant entrepreneurship, we have found the SEED Schools which we have featured in our business section. Harish Mamtani and Manish Kumar have founded an enterprise which seeks to turnaround low-cost private schools. The idea is to make them sustainable and improve learning outcomes.

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Printed and published by Umesh Anand on behalf of Rita Anand, owner of the title, from A-53 D, First Floor, Panchsheel Vihar, Malviya Nagar, New Delhi -110017.

Printed at Samrat Offset Pvt. Ltd., B-88, Okhla Phase II, New Delhi - 110020.

Postal Registration No. DL(S)-01/3255/2015-17.
Registered to post without pre-payment U(SE)-10/2015-17 at Lodi Road HPO New Delhi - 110003 Registered with the Registrar of Newspapers of India under RNI No.: DELENG/2003/11607
Total no of pages: 36

IN THE LIGHT

SAMITA RATHOR

LETTERS

School in the sky

I read your cover story, 'School in the Sky', with great interest. This is what it takes for civil society initiatives to succeed: education professionals who deeply understand education, community empowerment, systemic change and funders who 'get it'. Funders need to share their vision with the NGO, have the resources, and be willing to partner NGOs in the long term. This is a case study for NGOs and funding agencies! Kudos to *Civil Society* for spotting a pioneering model of transformative change in education.

Sveta Davé Chakravarty

Your cover story was very inspiring. One can learn from such initiatives. Being a child rights activist it is always encouraging to read these kinds of stories and know this is happening across different parts of the country.

Arvind Singh

Excellent work and always a benchmark. Thanks to *Civil Society* for highlighting this endeavour for a greater cause.

Pradeep Ghosal

Chennai's trees

I read your story, 'Cyclone Vardah and Chennai's Missing Trees', completely. It is an awesome story. The kind of work being done by Shobha Menon and Nizhal should be replicated across Indian cities. I especially appreciated their use of technology to identify exotic and indigenous trees, their detailed research on each species, and the parks they have populated with trees.

Bobby Dey

Disability and jobs

I read your interview with Javed Abidi, 'Disabled people now have jobs in the best companies.' Though the new Disability Act marks considerable improvement, what has not received proper attention is the issue of establishing institutions for persons with disabilities. The government needs to encourage companies, NGOs and foundations to set up schools and residential facilities especially for autistic persons. Most of them are non-verbal. This is a serious handicap. Providing trained therapists who can upgrade their knowledge is another area requiring attention.

Narendra Kumar Bajpai

There should be a reservation policy in the public and private sector for giving handicapped persons like myself jobs. Currently, companies do not easily give jobs to people with disability. All they do is provide 'training.'

Devesh Sinha

Can you please tell me which public sector companies provide jobs to the disabled? I don't know of any.

Gugulothu Ramesh

Old Goa

Thanks for the story on saving Old Goa. The people of Goa are getting very impatient and irritated with the government's indifference to our heritage. It just wants to flood our state with tourists and miners. Both are ruinous for the environment.

Linda Bardez

I hope this group of concerned citizens will be able to convince policymakers to implement a practical doable plan. We Indians do not appreciate our heritage and so do not preserve our monuments. There is much to be learnt about this from the West.

Evita Fernandez

Green medicine

Thanks for 'Ayurveda Advisory'. We really appreciate the advice being given by Dr Srikanth. Ayurveda has truly emerged as green medicine, gentle and effective.

Vijaylakshmi

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‘WE ARE AN UNUSUAL UNIVERSITY AND THAT IS ATTRACTIVE’

Anurag Behar on how the Azim Premji University offers a new paradigm in higher learning

Civil Society News
New Delhi

THE Azim Premji University was founded five years ago to contribute to achieving a just, equitable, humane and sustainable society. Its founders were clear they wanted to strengthen nation-building and enliven the social sector. It was to be a university with a higher purpose beyond fees and degrees, and the rat race of employment.

But how does one translate idealism into reality? The founders began by defining their mission and vision in great detail. Next came the programmes, beginning with their core strengths in education and development. They handpicked teachers, enrolled diverse students, designed practical curricula and opted for an unusual pedagogy.

Over the years, the Azim Premji University has acquired an edge of its own. It has an attractive identity. It provides its students and faculty an unconventional space within which to learn and teach. It allows them to go beyond classrooms in search of knowledge and experience.

The university has undergraduate and postgraduate courses. It has five schools: the School of Education, School of Development, School of Policy and Governance, School of Liberal Studies and School of Continuing Education. Its campus is a hub of cultural activity. Students who graduate have found jobs in the social sector.

“Universities the world over are sometimes called ivory towers because they get disconnected from the reality outside their campuses. But we aren’t disconnected from reality,” Anurag Behar, Vice-Chancellor of the university, said in an interview to *Civil Society*.

The Azim Premji University was founded five years ago. How far has it succeeded in achieving its stated objectives?
If in 2011 or 2012 somebody asked me whether I would be happy with where we are today, I would have said, Yes. That’s the brief answer to your question.

We set out to establish a university that is basically focused on contributing to the social sector. In 2009-10, when we started ideating, it seemed a very challenging task. First of all, where would we get faculty? We wanted to launch lots of high-quality programmes in education because they did not exist in our country. The second issue was where would our students come from and what would happen to them once they graduated?

Today, five years later, we have an extremely talented faculty. We have students too. Six batches have been admitted and four have passed out. Most important, pretty much every student from the MA Education and MA Development programmes has been placed on campus in a job in the social sector — the reason we started the university.

The faculty is so important. How did you find people who would teach?
You need to look at some fundamentals and some basics. First, we are an unusual university. We have this social commitment. In a country of our size, whatever the paucity of faculty or talent, a purpose of this nature attracts people. That has been our most important strength. There are lots of good people around. Unfortunately, it’s not like there are lots of good higher education institutions similarly committed. So when people hear of what we are doing, it seems attractive.

Second, while the university started in 2011, the Azim Premji Foundation’s work in school education predated it by more than 10 to11 years. So people knew we were into improving public education and they knew our ideological stand. Our 10-year history in school education established a certain clarity among people regarding what we were about. They knew we were not a new organisation setting up shop.

Those 10 to 11 years gave us a very good asset — a network of friends across the world of education. Illustratively, the first 10 to 15 people we recruited, we had known for years. We were very fortunate that they joined us because some of them are outstanding people. They have stayed with us.

But obviously you needed more people. Did you find them in the larger university system or did you discover them outside academia?
It was a deliberate strategy to ensure that we recruited a mix of people who were from the university system and people who were practitioners. We were apprehensive that this would be difficult. But it didn’t turn out to be that way. In hindsight, if you look around in this country, how many institutions are socially committed and clearly non-commercial? So this deep social commitment combined with the non-commercial nature of what we do is an attractive proposition.

We could recruit because teachers and practitioners were ready to do this elsewhere but did not have the opportunity perhaps. Or the opportunity was a very isolated one. If you are a sociologist interested in school education and you are in a university, you are alone.

But in the Azim Premji University you will find a bunch of sociologists, anthropologists, economists, all interested in school education. So you will find an ecosystem of likeminded peers. In academia this is very important. It’s not just about not getting the opportunity.

Practitioners are those who have interacted directly with teachers in the public school system and have worked with NGOs and civil society organisations for maybe 20 to 25 years. They see the university as a platform that multiplies the effect of their work.

So one of the benefits of your university has been to codify experience?
I wouldn’t use that phrase. All education is an attempt at codifying experience. Because our university is so focused on the social sector, in terms of curricula and overall culture, we strive to ensure we are deeply connected with the world of practice.

I’ll give you a few examples. All three of our master’s programmes have a very large amount of fieldwork. Students do 16 weeks of fieldwork and also spend every Wednesday in the field. It has been built into the curriculum and is taken very seriously. Fieldwork is credited and mentored.

We encourage our faculty members to engage with the world of practice. I think it’s one of the things they find exciting here. You can teach, do research and go work with some NGO. So that’s an integral part of work.

There are people in the social sector with rich experience and knowledge, most of it disaggregated because it is all a part of rolling action.
It’s a huge issue. What we are trying to attempt is to develop deep-thinking practitioners. We don’t want practitioners who won’t think and thinkers who won’t practise.

> **‘What we are trying is to develop deep-thinking practitioners. We don’t want practitioners who won’t think and thinkers who won’t practise. We want our students to think, question, analyse, build...’**

Anurag Behar: ‘We are socially committed and clearly non-commercial’

We want our students to go out there with the capacity to think, question, analyse, build thoughtfully.

A lot of effort must have gone into shaping the curriculum. What was this phase like?
From the very beginning we were deeply devoted to the idea of ensuring our student body is diverse. We were very clear that we didn’t want a university where all the students came from a reasonably privileged background. Now that has many implications.

You will then have students from elite colleges in Delhi and students who have five to 10 years of experience. But you will also have students coming from Tonk, Sirohi or Purnea, students who have studied in a school in Hindi. Diversity has implications on how you design your curriculum.

How was the curriculum for the programmes designed?
Step one is the purpose of the university. If the purpose is social commitment, then what programmes will bring it to life.

We spent a fair amount of time thinking about the programmes we should build. We looked at various kinds of specialisation in the world of education — early childhood education, special education, school organisation and so on. Why do you need such programmes? Because they are pretty much non-existent in the country. You need teacher education programmes, and BEd programmes because there are very few good ones around. So there were various reasons that drove various programmes.

This step is critical. Universities and academic institutions don’t spend enough time thinking about what programmes to start. We came up with a priority list. The first two we thought we would start were the master’s in education and the master’s in development — a grounding in liberal education.

We didn’t want our programmes to become technocratic tools where you learn five techniques and try and implement them. You need to have the ability to think through things. We thought through the nature and character of the programmes.

And the students?
The next step was to understand the kind of students we would be getting. You can’t get a relevant curriculum without understanding that. The choice that faced us was whether to restrict ourselves to students with a background in humanities, philosophy, social sciences. Had we done that we would have had students with a basic understanding of social issues and their dynamics. We would have then developed the curriculum differently.

But we didn’t do that. Lots of young people end up studying physics or whatever. It’s not always a choice they have made. It’s a social determinant. How can you close the option to a young person who studied engineering but really wants to be in education? So, knowing the nature of our country and the way education choices are made, we allowed the eligibility criteria to be an undergraduate degree in any discipline.

Now, if your students come from diverse disciplinary backgrounds, it has deep implications on the curriculum. Then you have to introduce students to the basic philosophical, sociological, economic, political ideas in education and give them a grounding. That became an integral part of the curriculum.

In fact, our students find this deep immersion in the politics, economics, sociology and philosophy of education most exciting and challenging. The curriculum isn’t divorced from fieldwork but integrated with it.

Then you move to the specifics in that field, whether it is education, pedagogy, the history of education and so on. The programme prepares you so that you can really go out and work in various kinds of roles.

We also saw the need for certain kinds of specialisation. So in our core programmes in education and development, students can choose to specialise in early childhood education, school organisation and management, curriculum, pedagogy, development of livelihoods, public health and so on. You can also just do a balanced degree programme if you don’t want to choose a specialisation.

Continued on page 8

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How is pedagogy organised?
That depends on your educational philosophy. If your intent is to develop thinking, autonomous individuals with capacities that are not just cognitive but ethical and social, it will reflect in your pedagogic environment.

For us the classroom environment is dialogic. It is exploratory and rooted in reality. When you juxtapose this pedagogy with a very diverse student body, the classroom environment becomes challenging. You have students who know English, and those who don't. You need to make sure you are really using the student body itself as a resource.

Most of our students who have graduated speak in admiration of their teachers and the diverse student body that gave them a learning opportunity which would not have been there otherwise.

How do you use your student body as a resource?
Let's take one example which is often overlooked in higher education. You ensure that a lot of your work is group work. You don't just listen to a lecture and take notes. The group is designed carefully. You have a person from Purnea, someone who worked

> **'You ensure that a lot of your work is group work. You don't just listen to a lecture and take notes. The group is designed carefully.'**

in the IT sector, a graduate from an elite college, a girl whose parents are landless farmers…a group like that creates a dialogue that is completely different. Pedagogically, the university experience in group work – assignments, fieldwork — is very important. The faculty engages with the group to make sure it functions.

A lot of work is also about reflection, reading and understanding. The teacher is aware of the diversity in class. So if you have a student from a deeply conservative background her perspective on gender equity in school may be different from a student from a privileged background. Faculty members will help to bring that out. This is an art and comes from a certain commitment to society.

If you have a vibrant student life with cultural programmes, as we do, that again brings diversity to the fore.

What kind of jobs do your students get?
Almost 99 percent have joined the social sector. I don't think more than two to five percent have joined the for-profit corporate world. Within the social sector they do diverse work ranging from on-the-ground work with school teachers to domain work in public health and education, programme management, and research and documentation. ■

CROCS DO THEIR OWN NUMBER IN THE ANDAMANS

Shyam Bhatia
Port Blair

RISING attacks on humans by saltwater crocodiles in the Andamans are stoking fears about how this will affect day-to-day life and tourism in these idyllic islands located some 1,000 kilometres off the east coast of India.

No one in authority, least of all officials from the forestry department, is prepared to admit that there is a problem, or that there are regular attacks by the predators that have resulted in deaths and injuries to both children and adults. Principal Conservator Manmohan Singh Negi, who is responsible for wildlife in the Andamans, is reluctant to discuss any actual statistics. "If you want to send anything to a news agency, you must first clear it from here," he says, by way of explanation.


Scars from a crocodile encounter

The forestry department is responsible for both conserving these carnivores, a protected species, as well as protecting humans. When attacks occur, it is also the forestry department that is responsible for awarding compensation. Payouts in the past have ranged from tens of thousands of rupees to as much as ₹1 lakh per victim.

The expansion of the human population and regular seismic activity in this island chain may be one reason the crocodiles appear to be lashing out so aggressively.

Another reason could lie in the 2004 tsunami and the 25-foot-high waves that disrupted their natural habitat, forcibly relocating them all over the islands. The forestry department's half-baked response has been to free any trapped crocodiles by releasing them into a mix of forests and mangrove swamps, hoping they will not venture into areas inhabited by humans.

What has happened, in fact, is a dramatic increase in crocodile numbers with nothing to challenge their multiplication but for the occasional attack by the likes of massive pythons. Widely differing estimates put their numbers at anything from 450 to more than 2,000. The forestry department is more conservative, with one official coming up with a widely disputed total of 470.

The department's reason for downplaying numbers is to avoid attracting poachers from nearby countries like Thailand who have turned up in the past, armed with stun guns, lured by crocodile hides fetching as much as $2,000 per hide, sufficient for at least one handbag or a pair of shoes. Two or three hides are believed to be sufficient for a bullet-proof jacket.

"The crocodiles have scattered everywhere," says Stanley Johnson, Deputy Manager of the Andamans' largest saw mill. "Lohabarak sanctuary is where they used to be kept, but after the 2004 tsunami they scattered. Now they have multiplied to thousands. Every year seven to eight people are killed."

As their numbers have multiplied, say locals, so have confrontations with humans, causing injury or death. "What I have heard is that these crocodiles are being released on a mass scale into the forests," says Mayur, a 26-year-old islander working with a private airline who was born and raised in Port Blair. "From the forests they have spread out."

Akash Paul, an Assistant Conservator of Forests, admits there have been attacks but claims they number no more than two or three a year. "Recently, human-crocodile conflict has increased," he agrees before highlighting two particular cases in which the victims died.

One was a young fisherman, Makunda Roy, from Badmash Pahar who was grabbed by a crocodile while out fishing. Last September, Jasintha Thirley, a housewife from Ranchi Basti, was grabbed and killed by a crocodile while she was washing clothes and utensils in a freshwater *nullah.*

Still further back, according to the register of confirmed deaths, is the instance of eight-year-old Madhulika Das who was grabbed as she and her family waded out to a dinghy anchored close to their home.

Yet these few examples do not convey the full horror of crocodile aggression, nor are they representative of the graph of rising attacks.

Typical of some unregistered cases is the miraculous survival story of 45-year-old Lipesh Das from Manglutan who attracted the attention of a crocodile as he waded out to start up a water pump on the edge of the village *nullah.* His aim was to channel fresh water for the fields of *bhindi* and *baingan* that he cultivates for a living.

Before he knew it, Das had been grabbed and shaken by a massive three-metre crocodile that surfaced behind him. His screams fortunately attracted the attention of other villagers who came to his rescue. A shopkeeper stabbed the crocodile with a knife, forcing it to release Das from its jaws. Five months and 170 stitches later, the farmer is back on his feet, grateful to have survived.

At least as compelling is the story of Sarjit Bhairagi, a 25-year-old scuba diver who was fixing the propeller of his boat, anchored off Wandoor Beach — part of the Mahatma Gandhi National Park.

PICTURES BY SHYAM BHATIA


Bhairagi who was hurt on his head. It's his arm on the left


Lipesh Das needed 170 stitches

Signboard warning people of crocodile sightings in the vicinity

"Our boat's faulty exhaust pipe had broken off into the water which had mangled up the propeller. Me and my fellow diver, Abhi Nashbala, went to repair it. Before I knew it, this 2.5-metre green and yellow reptile had my head in its jaws.

"It took me under but I had the good sense to go limp so it did not sense any resistance. This gave Abhi time to dive after me and impale the crocodile's eyes with his fingers, forcing it to release me.

"When I came out, I was bleeding from everywhere and stayed in hospital for 25 days. I had 40 stitches with 29 in my head alone."

Despite official hospital records, it seems Paul and the other conservators choose not to register the experiences of either Bhairagi or Das, which may be why neither man has been offered any compensation. Paul adds by way of further justification that Bhairagi was diving in protected waters that are meant to be off-limits for humans.

The conservators all agree there have been crocodile-related tragedies, like the widely reported case of the American woman tourist who was snorkelling in a supposedly safe cove off Havelock Island when she was attacked and killed in front of her horrified Indian boyfriend. The authorities implied her partner was responsible until he produced video evidence of what had actually happened.

The attacks have matched a rise in sightings of the reptiles who like to sun themselves on the beaches of Port Blair and nearby recreation spots like Corbyn Bay. Local headmaster Francis Xavier has a clear recollection of arriving at work one morning to find two crocodiles basking on the sea front, only a few hundred metres from his school.

Despite mounting evidence to the contrary, the Forestry Department continues to stress that crocodile attacks are rare. Its belated response to the public's fears has been to put up signs reading, "Crocodile sighted nearby, beware." Some signs in red and green even have the date and time when the last crocodile was seen.

Another safety measure has been to instal barriers of netting in the waters off key beaches like Wandoor, hoping this will create small but safe swimming zones in the sea.

Amit Anand of the Andamans Tourism Department agrees that new submerged areas have been created since the tsunami and they have attracted crocodiles, but he stresses there have been no attacks on tourists for the past six or seven years. "Some locals have been attacked and there have also been attacks on cows grazing near the creeks. Warning signs have been put in areas to discourage those who see water and want to jump in. Tourists also need to behave responsibly."

Asked if licensed culling of crocodiles might be a way forward, Zai Whittaker, Director of the Crocodile Bank Trust/Centre for Herpetology in Chennai, responds, "As with elephants in South Africa, the time may come when culling is necessary, but we should try everything else first.

"My understanding (and I'm not a biologist) is that, as with all human-animal conflict, habitats are dwindling, and the human population is growing. When I first went to the Andamans in 1976, the human population was 80,000. It has multiplied many times, with no proper criteria for settlement. We have destroyed this dynamic animal's home, and are now blaming it for attacks." ■

‘We face a serious shortage of quality skilled young people’

Prof. Santosh Mehrotra on the demographic dividend

Civil Society News
New Delhi

INDIA has a growing number of young people ready to enter the workforce and if they can be given the education and skills they need for jobs away from agriculture, a significant opportunity presents itself for boosting economic growth and transforming the country.

The window for making the best of this demographic dividend is estimated to be till about the end of 2030 — or another 20 years. The possibilities are huge but to avail of them India needs to get its industrial policy and strategy in place and back it up with better healthcare, education and skilling programmes.

Post economic reforms several strides have been made. Millions have come out of poverty thanks to investments in infrastructure and the growth in services and manufacturing. There are more children in school and more of them are reaching the secondary level. Girls are getting an education and the total fertility rate is down. Health infrastructure has been expanded. There is also access and empowerment thanks to the Internet and mobile telephony.

What is questionable is the quality of these achievements. Much more needs to be done to meet aspirations and put in place the foundations of a modern and purposeful economy which will satisfy the hopes of young people who are moving away from villages as part of a growing trend of urbanisation. These complexities are explained lucidly and comprehensively by Professor Santosh Mehrotra of the Centre for Informal Sector and Labour Studies at Jawaharlal Nehru University, in his recent book, *Realising the Demographic Dividend: Policies to Achieve Inclusive Growth in India*.

Professor Mehrotra spoke to *Civil Society* at his home in New Delhi on why he has great hope for what can be achieved but is simultaneously deeply concerned that, in the absence of a sense of mission and purpose, a great opportunity to put India on the path of high and inclusive growth might be missed.

What are the immediate challenges in realising the demographic dividend?
The immediate challenge is of creating jobs in the non-agricultural sector. The demographic dividend can only be realised if people leave agriculture and get employed in industry and modern services, like banking, tourism, insurance, health, education…. That’s what the educated young would want.

We are currently adding five to seven million young people per annum to the job market. We aren’t adding 12 million per annum, a figure we keep hearing from the pink press, policymakers and academics. Everyone seems to be in a tizzy with the wrong numbers. This misconception arose because over a five-year period from 1999-2000 to 2004-05 we added 12 million people to the labour force. But never before 2000 and never since 2005.

So what is the figure you would go by?
We estimate that between 2004-5 and 2011-12 we added only two million per annum to the labour force, as opposed to 12 million in the first half of the decade.

The numbers fell for a very good reason. By 2007 all our children between six and 11 were in primary school. We achieved a net enrolment ratio of 97 percent. Yes, 60 years too late but, thankfully, we arrived. That meant there was upward pressure on enrolment at upper primary school level so gross enrolment is probably between 90 and 100 percent. That created upward pressure at the secondary school level as well. The fantastic news is that

> ‘Girls are getting better educated, probably marrying later and hopefully looking for jobs outside agriculture.’

between 2010 and 2015 there was a remarkable increase in the gross enrolment ratio in Classes 9 and 10. We went from 62 percent of gross enrolment of 15 and 16-year-olds in 2010 to 79 percent in 2015. It must have risen further which means four out of five children are in secondary school.

The rise in enrolment numbers generally, and especially at secondary level, has been driven by girls. There is gender parity at the secondary level which is a remarkable development in a country at our level of per capita income. It is phenomenally good news from a demographic dividend perspective.

The Total Fertility Rate (TFR) of females between 15 and 49 years, as per the National Family Health Survey-4 (NFHS-4) of 2015, has sharply fallen to 2.2. The replacement rate is 2.1. In 2014-15 we were at 2.2 so we must now be at 2.1, which is absolutely fabulous news.

There is direct correlation between the rise of schooling among girls and the decline in TFR. Girls are getting better educated, probably marrying later and hopefully looking for jobs outside agriculture. Let’s remember they aren’t going to work in agriculture like their mothers. They won’t even do home-based non-agricultural work their mothers did like making *bidis* and *agarbatti,* and *zari-zardozi* and so on. They will look for urban jobs in modern services or factory jobs. But that will happen only if jobs are growing.

Where are the jobs?
So let me start with the good news and then the bad news. My book deals with the fact that between 2004-05 and 2011-12 the rate of growth of non-agricultural jobs was 7.5 million per annum. Yet we were adding only two million people to the workforce. This implies that the open unemployment rate would have fallen and it did.

But there is a complication here. After 2004-05, for the first time in post-Independence India, the absolute numbers of those engaged in agriculture began to fall. Never in India’s history had we seen a fall in the absolute numbers of those employed in agriculture. We have seen a systematic decline for the past 30 years but never an absolute fall. An absolute fall is really quite critical because it corresponds to what development economists call the Lewisian turning point. The absolute numbers of those employed in agriculture fall and alongside wages rise in both agriculture and non-agriculture.

In fact, the reason jobs grew from 2004-5 to 2011-12 was because there was massive investment in infrastructure and housing in both rural and urban areas. So construction jobs grew at a phenomenal pace. In 2000 the total number of construction jobs was 17 million. By 2012, jobs in construction tripled to 51 million. So people leaving agriculture were getting absorbed in the construction sector.

As a result, wages rose systematically in rural and urban areas for low-skilled workers, which is the reason poverty fell in absolute terms. The incidence of poverty, the share of the population below the poverty line (BPL), had been falling systematically from 1973 to 2004 and fell all the way up to 2011.

However, never in India’s history had there been an absolute decline in the numbers of poor people until 2004-5. The absolute numbers of the poor fell from 406 million in 2004-5 to 268 million in 2011-12, a stupendous achievement for India, of Chinese proportions.

The economy grew at 8.4 percent per annum from 2003-04 until 2011-12. The increase in rural roads has been phenomenal. You can access most villages today on metalled roads, thanks to the Pradhan Mantri Grameen Sadak Yojana (PMGSY). In the 11th Five Year Plan from 2007-2012, the country invested $500 billion in infrastructure or $475 billion, to be precise, or $100 billion per year. That’s huge.

AJIT KRISHNA

Prof. Santosh Mehrotra: ‘The government’s job is to ensure a demand-driven skilling environment’

But what about the quality of this employment?
I am not claiming that the quality of employment was very good. However, why would the poor leave agricultural jobs if they didn’t think their earnings would be higher? Of course they were earning more. Between 2004-05 and 2011-12, 37 million people left agriculture, at the rate of five million per annum.

And the bad news?
Since then, the growth rate has fallen. The infrastructure rate has fallen. In the last two years of the UPA government we went into policy paralysis.

The new government took some time to settle down. A lot of projects were stalled mainly due to MoEF (Ministry of Environment and Forests) approvals. By late 2015, investment in infrastructure began to rise again.

In his budget speech, Arun Jaitley claimed that the government is planning to spend ₹4 lakh crore or $57 billion on infrastructure this financial year. It is better than before but nowhere close to the $100 billion spend earlier.

What the government has done, with an eye on 2019, is to significantly increase investment in rural housing through the Pradhan Mantri Awas Yojana. Around a crore of houses are planned to be built between 2016 and 2019. Allocation for rural roads has also been increased. All this will generate jobs in rural areas for agricultural workers or for those leaving agriculture.

But will it generate jobs for five to seven million educated young people, looking for non-agricultural jobs and not construction jobs? That’s where the problem lies.

So we need higher productivity jobs?
Those jobs were growing in the earlier phase. Of the seven-and-a-half million per annum of additional non-agricultural jobs that were created between 2004-5 and 2011-12 only three-and-a-half million were in construction. The remaining were in

> ‘The first priority is an industrial policy and strategy. We also need an education policy and a skills policy.’

services and manufacturing. True, those jobs were mostly in the unorganised sector. But the point is, they were fetching higher wages than those in rural areas, especially agriculture.

The educated young are mostly acquiring a general academic education. They are not getting vocationally trained. We still face a very serious shortage of quality skilled young people.

What do we need to do to match skills to jobs?
First, you need an industrial policy. The tragedy is, since 1991 we haven’t really had one. Contrast this with East Asia and China in an earlier stage of development. They were in mission mode, based on an industrial policy. After 1979, when economic reforms began in China, their Planning Commission, which still exists, became more powerful, not less.

What priorities would you set?
The first priority I would set is to have an industrial policy and an industrial strategy. We also need an education policy and a skills policy which is aligned to an industrial policy. That’s what East Asia did.

Second comes the quality of our human capital. In 1979, when economic reforms began in China, they had a relatively well-fed and healthy population. This is true of other East Asian and Southeast Asian countries as well. We still have malnutrition levels worse than Africa.

Certainly, IMR has fallen sharply and our public health system is more functional than 10 years ago. But we are still not spending enough on health.

Besides, those countries had a much better educated population. As per NSS (National Sample Survey) data, 23 percent of our 50 million workforce is illiterate, 26 percent has attended school till primary level or less. That accounts for half our workforce. An additional 16 percent has studied up to secondary level, say, till Class 8. So two-thirds of our workforce has less than middle-level education. Things are changing but this is the stock we have right now. The productivity of the workforce is correlated to education.

While more children are going to school, there are gaps. Teachers don’t always teach, children don’t learn, the quality of education is poor. How important are these considerations?
These are hugely important. Two problems need to be fixed to improve the quality of learning in government schools. One, our teachers must turn up to actually teach. The second is to improve the poor subject knowledge of our teachers.

Children must have an interest in continuing to be in school. We have to improve their learning capacity. We can do that by improving the nutritional levels of all children from 0-6 years and ensure that everyone in rural areas has a toilet and uses it. Between NFHS-3 and NFHS-4 the incidence of underweight children has fallen only from 43 percent to 35 percent.

It is critical that the Swacch Bharat Abhiyan does not fail. It should focus on behaviour change and not on building toilets.

Are skilling programmes providing jobs?
The government seems to be living under the illusion that if it finances institutions that provide skilling, the young will find jobs. The government’s job is to ensure a demand-driven skilling environment. Instead, it has evolved an ecosystem that is supply-driven in the past seven to eight years. It is driven, financed and owned by the government. In reality, it should be driven, financed and owned by industry.

Certainly, the government can give rural youth a chance to transit to urban jobs by locating skilling/vocational institutions closer to villages. The role of industry in financing such skilling institutions must become paramount. Government can incentivise that. Only industry knows the workforce it needs because they are going to employ them.

The government has created institutions like the National Skills Development Council (NSDC)

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Will coconut get back tree status?

A storm of protests broke out after the coconut tree was officially reduced to being a mere grass

Abhinandita Mathur
Panaji

PEOPLE who voted for the Goa Forward Party (GFP) are waiting to see what happens to the status of their precious coconut tree now that the party has supported the Bharatiya Janata Party (BJP) to help it form the government in the state.

Emotions ran high over the status of the coconut tree two years ago, when the previous BJP state government under Chief Minister Laxmikant Parsekar passed a bill to declassify the coconut tree from the Goa Daman and Diu Preservation of Trees Act, 1984. Overnight, the coconut tree ceased to be a tree. Its status was reduced to being a mere grass.

The GFP came into being with the coconut tree as its election symbol. The new party got a lot of support from young voters when they promised to restore the status of the coconut tree and protect Goa's identity.

Vijay Sardesai, leader of the GFP, has issued a statement reasserting his commitment to the cause of the coconut. He has reassured his supporters he will get the government to withdraw the order on the coconut tree at the soonest.

After the government's order in 2015, there was outrage in the media. The opposition, green activists and civil society groups unanimously criticised the government. Social media exploded with memes and jokes ridiculing the decision.

"The definition of a tree is a plant with main trunk and branches but a coconut palm does not fit into this criteria as it has no branches," the government retorted in a weak display of self defence.

The government order galvanised political parties and gave them the opportunity to stake their claim on Goan identity issues and the custodianship of true 'Goemkarponn'.

Along with the Congress, two political voices vociferously raised were of Rohan Khaunte and Vijay Sardesai of the GFP who were at that time independent MLAs.

Khaunte in an interview to the local daily, *Herald*, alleged, "The Bill has come at a time when the Vani foods proposal is being passed by the Investment Promotion Board (IPB). The place where the project is coming up has a lot of coconut trees. It is a backdoor entry to IPB projects which are in orchard zones with a lot of coconut plantations".

Sardesai was at the forefront of the campaign. "The coconut tree which is considered sacred and highly respected by all sections of Goans is an integral part of Goa's identity", Sardesai said.

The coconut evokes strong feelings among people here. Damodar Mouzo, a Padmashree awardee and well-known writer from Goa, points out the relevance of the coconut in Goa culture and why the move to call it a mere grass outraged people.

"The coconut is not just a tree. It is truly a symbol of our Goemkarponn (identity), besides being a very useful tree. It is our kalpavriksha. Traditionally the coconut tree has been seen as a protector for Goa's land. To a lot of people including me, the government's order was clearly a step towards allowing the land to be deforested for greed and personal gains".

GFP's supporters are are now waiting and watching the situation with some disappointment. Priyanka Gauns, an undergraduate student at the Goa University and a disillusioned GFP voter, says, "Making Goemkarponn a key issue and then siding with the very people known to destroy it feels like a true betrayal. What is left for us to believe? This is not what we voted for. For a unique state like ours, we need to protect whatever is left of our culture and land."

Shelza Naik, a housewife from Ponda whose kitchen is largely dependent on coconut-based products, said, "I am not a keen follower of politics but one thing is clear to me that the government is not longer thinking of Goa and Goans. We all speculate how our politicians work. Their coconut order left no doubt in my mind about what sets their agenda. How can they do this to our coconut?"

Nikhil Haldankar, a student of the Goa College of Engineering, created and shared several memes and jokes on social media when the news first broke. "We made up so many jokes and memes to ridicule the situation and shared them widely on social media networks. But with the recent turn of events, it's difficult to find solace in humour. Because, unfortunately, the joke is on us".

The government failed to provide a convincing rationale for downgrading the coconut tree.

Conservationist and founder of Wild Otters, Atul Borkar, questions the logic and timing of the move. "My problem is, what made them think about this out of the blue, after so many years? Was the decision based on a new scientific discovery which led them to devalue the coconut tree? Because as per scientific classifications best known to us now this declassification was totally illogical. Felling the coconut in Goa will cause immense damage to the ecological balance".

Hopefully, the coconut will regain its status and save itself along with the fast depleting environment of this ecologically rich state. ■

Demographic dividend

Continued from page 11

which finances private vocational training providers who then skill young people for anywhere between 10 days to three to four months. We have just written a report for the Ministry of Skill Development and we told them to stop these short-term courses.

Young people joining these courses are half-educated. At best they have studied till Class 8 or 10. So what NSDC and private providers are doing is to skill half-educated young people and then expect them to get jobs in the organised sector. The evidence is that the employment rate of such courses is just 27 percent. The failures of the supply-driven system are now hitting the government. Hopefully there will be a course correction.

But industry has not shown much interest in getting involved in skilling programmes.

If industry does not come onboard, skilling programmes will be a non-starter. The demographic dividend, once gone, will never come back. The future of our children and the nation is at stake.

Making industry pay for skilling programmes will ensure there is no mismatch between supply and demand. It will ensure quantity and hopefully quality of the right order. Around 62 other countries are doing it this way.

The government can levy a tax on all registered enterprises of one to two percent on payroll costs. The money will go into a sectoral fund managed by industry and reimbursable. If companies train, they get reimbursed. This system can finance training of workers for small and medium enterprises as well, excluding the construction sector. ■

Hospital births up in J&K

Jehangir Rashid
Srinagar

JAMMU and Kashmir (J&K) has progressed in the health sector in the past decade and an important reason is the improvement of facilities in the public health sphere. The accomplishments of the state are reflected in the National Family Health Survey (NFHS)-4 for 2015-16. The survey report corroborates the fact that healthcare facilities have improved across the state.

The NFHS-4 is considered a benchmark for other related surveys. It points out that more than 85 percent of births in the state are institutional. A decade ago, the figure was 50 percent.

"As per the NFHS-4, 97.3 percent births in the urban areas of J&K take place in hospitals. In rural areas institutional births account for 82 percent of total births. This means that 85.7 percent of babies are born in health institutions," says Dr Yangchan Dolma, Assistant Director, Family Welfare, Maternal and Child Health (MCH) and Immunisation, J&K, quoting figures from NFHS-4.

The survey report says that field work was carried out from 31 January 2016 to 16 November 2016 by the Population Research Centre, Srinagar. The information was gathered from 17,894 households. While women accounted for 23,800 respondents, the number of men was 5,584.

According to the survey, deliveries carried out at home account for 2.2 percent. In 2005-06 the figure was 6.5 percent. In urban areas, 0.8 percent of deliveries took place at home, and in rural areas 2.7 percent babies were born at home.

Dr Dolma, who has worked with the World Health Organisation (WHO), says that the success was not achieved overnight. A sustained process of achieving excellence was taken up by the Directorate of Family Welfare, MCH and Immunisation. She says the department is working tirelessly to ensure that world-class healthcare facilities are provided.

The Directorate of Family Welfare, MCH and Immunisation deals with all maternal and child health aspects. It is also entrusted with the responsibility of ensuring that the target population is covered by the immunisation programme. It is due to the efforts of this directorate that J&K has been very successful in the immunisation programme launched across the country.

However, the survey report also points out that more than 75 percent of births take place in private hospitals through caesarean section. The figure was 35.8 percent in 2005-06. It says that while 87 percent of caesarean births take place in private hospitals in urban areas, 64 percent of such births take place in private hospitals in the rural areas.

BILAL BAHADUR

Polio drops being administered

"The picture with respect to caesarean sections in government hospitals is different from that of the private hospitals. In government hospitals, 35 percent babies were born under caesarean section. In the urban areas, 48 percent of caesarian births took place, whereas in the rural areas births due to caesarean section were 30.8 percent," says Dr Dolma.

The survey report points out that the Infant Mortality Rate (IMR) has come down to a great extent in the state. While the IMR was 45 per 1,000 live births in 2005-06, it is now 32 per 1,000 live births. The NFHS-4 report says that IMR in urban areas is 37 per 1,000 live births and 31 per 1,000 live births in rural areas.

The report points out that the under-five mortality rate (U5MR) has been recorded as 38 per 1,000 live births. The U5MR with respect to urban areas is 41 and in rural areas it is 36 per 1,000 live births. The U5MR was 51 in 2005-06.

"The NFHS-4 report points out that we have achieved many targets in providing better healthcare facilities to the people. Still, we have a long way to go, but I am hopeful that we will improve in the coming days. It is important to cover the population living in the rural areas and we stand committed to that," says Dr Dolma.

The survey report says that 54 percent of women in J&K received financial assistance under the Janani SurakshaYojna (JSY) after giving birth in a health institution. While 55.7 percent of women received financial assistance under JSY in the rural areas, around 50 percent of women living in the urban areas availed of it.

The survey report points out that 75 percent of children in the age group of 12-23 months were immunised in the state. It says that 84 percent of children in this age group have received three doses of the polio vaccine. It says that 97 percent of children have received most of their vaccinations at the health institutions in the government sector.

The NFHS-4 report says that around 84 percent of men in the state know that consistent use of condoms can reduce chances of getting HIV/AIDS. It says that 68 percent of women in the state are also aware. The survey report says that 2.8 percent of women in the state consume some form of tobacco while in the case of men it is 38 percent. ■

Samita's World *by SAMITA RATHOR*


Annu Kumari


Sonia Khatri


Dr Santosh Kumar Giri


Priyanka Gaikwad


Seema Terangpi

The many stories of Saahas

WISCOMP campaigns for peace, gender equality

Kavita Charanji
New Delhi

ANNU Kumari was just three years old when she was married off by her family. The daughter of a Dalit vegetable seller, she is from Kishangarh in Ajmer district of Rajasthan. When Annu grew up, she joined the Mahila Jan Adhikar Samiti and, with great perseverance, got her marriage declared null and void. She went to college and now has master's degrees in history and English as well as a B.Ed. Annu wants to become a teacher. "My battle against child marriage was a small one. I faced so much pressure to get married but I feel education and relationships are much more important," says Annu, who now fights for Dalit girls' right to education.

Annu was one of seven individuals to be honoured with the Saahas Awards by Women in Security, Conflict Management and Peace (WISCOMP). Founded in 1999, WISCOMP is an initiative of the Foundation for Universal Responsibility of His Holiness the Dalai Lama (FURHHDL).

"The awards recognise people from different parts of India who work quietly and tenaciously to counter gender-based violence, reclaim agency and become change agents," says Dr Meenakshi Gopinath, a political scientist and former principal of Lady Shri Ram College. The think tank works to build a culture of co-existence and non-violence from a gender perspective.

"WISCOMP is an important part of His Holiness' commitment to work with young people, empower women and nurture gender justice," says Rajiv Mehrotra, trustee and secretary of the foundation.

Deepa from Dehradun was another awardee. A survivor of domestic violence, she now lives independently with her two children. She helps other women survivors of domestic violence. She is also part of Appropriate Technologies, an NGO that works for women's right to livelihood in the hilly regions of Uttarakhand.

Sonia Khatri from Panipat in Haryana was honoured for her fight against sexual harassment. "I had to listen to all kinds of lewd, unmentionable jokes and conversations among my superiors when I worked with a child rights organisation," she says. Khatri persisted with her case and had to face ostracism from the community — they labelled her a sex worker for going out to work. "At one stage I thought I would either commit suicide or accept defeat," she says. Today, as a programme officer with the Participatory Research Institute of Asia, she combats sexual harassment at the workplace and all forms of violence against women and children.

Priyanka Gaikwad, 21, a college student, was also awarded. Her mission is to fight for girls' access to public spaces and playgrounds in Mumbai *chawls.* Gaikwad says she learnt the meaning of true empowerment when she attended life skills workshops run by Naaz Foundation and became a community sports coach. She now works with Akshara Foundation and continues her campaign to reclaim open spaces. "Girls have the same rights as boys," says the vocal Gaikwad.

"This is the first time a transgender is receiving such a prestigious award," says a smiling Dr Santosh Kumar Giri, founder and director-secretary of Kolkata Rista, an NGO that works with the transgender community in four states. Giri also works with Men Engage, a global network, to create gender awareness. Giri, who is from Kolkata, has faced brutal violence, harassment and gender-based discrimination.

Sunita, another awardee, is from Delhi. A survivor of domestic violence, she went on to work as a commercial taxi driver in Delhi. She is bringing up and educating three girls.

The awards also recognise men who work to end violence against women. Dhanraj Nandpatel from Yavatmal in Maharashtra was honoured. A social worker, the focus of his work is child health and nutrition. He reaches out across caste-based fault lines to end gender-based violence, child sexual abuse and stigmatisation of violence survivors.

There were also people who received special mention at the awards ceremony. Seema Terangpi and Aarti Meghwal are from the Northeast. Terangpi has faced a lot of discrimination in Delhi but continues to be a dedicated social worker. She works mostly with her mother's NGO, Bread for Life. Based in the Karbi area of Assam, the NGO runs livelihood projects for women. Terangpi also fights for the rights of trafficked girls, sex workers and victims of domestic violence. "I believe that there will be peace and understanding in India one day and we will accept one another for what we are," says the spunky young woman.

Meghwal from Loha Gunj, Ajmer district, Rajasthan, faced the prospect of marriage when she was just 14. She now works with the village Bal Samuh-Khushi on local issues and fights against child marriage. Her resolve is further strengthened by her association with the Mahila Jan Adhikar Samiti.

At the event, WISCOMP released its innovative training and curriculum manual that advocates gender equality. A film profiling four individuals who have countered gender-based violence was screened. Also, the Shero of Courage Award was given to feminist activist Kamla Bhasin for her relentless advocacy of gender equality and social justice.

The Saahas Awards are part of WISCOMP'S "Partners in Well Being: Youth Countering Violence Against Women" initiative which concluded recently. The project focused on Delhi and the National Capital Region and was supported by the Public Affairs Section of the US Embassy in New Delhi.

Launched in October 2014, Partners in Well Being called for people to act against gender-based violence. It also aimed at changing gender stereotypes, attitudes and behaviour towards women that result in violence against women in India through training, seminars, capacity-building workshops, film screenings, policy consultations and performances.

WISCOMP got school and college students, educators, activists, youth from displaced and marginalised communities, girls from rural areas, civil society members and policymakers involved in the project.

"We got people from Sawda Ghera on the outskirts of Delhi to talk about their experience of displacement and how it impacts women. Simple things like accessing toilets. They become sites of violence against women. It is not just the violence of exclusion. To be uprooted from the centre of Delhi increases the propensity for alienation and violence among young people," says Gopinath.

Lady Shri Ram College and Bluebells School International were the primary educational outreach partners for the project. Several NGOs participated as well.

WISCOMP has emerged as a pioneer in enabling women to play a greater role in security and peace in South Asia. "The idea is to look at South Asia as a vibrant space for both women's assertion and conflict resolution because we are such a conflicted region both within countries and relationships between neighbours," says Gopinath.

A large part of WISCOMP's work focuses on educating people for peace, conflict transformation and building on its research base of 300 publications. Talking about WISCOMP's Educating for Peace initiative, Seema Kakran, deputy director, says, "We work with schools, colleges, universities to explore how teachers, teacher-educators and young people can look at conflict as opportunities for building a more just, inclusive society and not just shun conflict. We also build curriculum so that teachers can introduce young people to ideas of non-violence and peace."

WISCOMP's flagship Conflict Transformation Programme has brought together 400 youth leaders, largely from India and Pakistan, for dialogue and training in peace-building over 2001-12.

"It was amazing what we achieved. Our learning was that individual attitudes and beliefs have to change. It is only when transformation comes at very personal levels, such as cultivating skills like empathy, listening to the other, recognising your prejudices, suspending judgement, that you are able to impact policy and influence public discourse," says Sewak.

In all its work, WISCOMP steers clear of stereotypes about building peace."We don't take an essentialist position that men make war and women make peace because women can also be perpetrators of violence. Our view is that women bring cohesive elements into their communities, while their informal networks give them information about conflicts that may skip the radar of intelligence agencies and security forces. They bring different skills to the table and these skills need to be optimally utilised. You are that much poorer for leaving out half the population in solutions to conflict," says Gopinath. ■

PICTURES BY AJIT KRISHNA

The WISCOMP team: Manjari Sewak, Seema Kakran, Apoorva Gupta, Diksha Poddar and Dr Meenakshi Gopinath

'The idea is to look at South Asia as a vibrant space for both women's assertion and conflict resolution.'

Saahas awardees with Meenakshi Gopinath,Justice Geeta Mittal, Kamla Bhasin, Mandeep Kaur and Craig L. Dicker, Public Affairs Officer, US Embassy

Are basic property rights the answer?

Civil Society News
New Delhi

EVERY Indian city has its share of slums. City governments have tried, over the years, various strategies and policies to deal with them and failed. Eviction is inhuman, low-cost housing finds few takers and fitting infrastructure into a jumble of half-built homes is messy. Redevelopment works if the slum is in a prime area and can attract builders. As a result, almost 33 to 47 percent of the urban population continues to live in slums.

A report by FSG, an international consultancy, recommends the way out as giving residents of informal housing basic property rights. The report is titled titled, *Informal Housing, Inadequate Property Rights: Understanding the needs of India's Informal Housing Dwellers.* The authors of the report, Vikram Jain, Subhash Chennuri and Ashish Karamchandani of FSG, spoke to experts and carried out surveys of informal housing settlements in Delhi, Hyderabad, Cuttack and Pune .

They argue that basic property rights would encourage residents to invest in home improvement and encourage municipalities to provide better services and infrastructure. The research focuses specifically on owner-occupants, those who don't pay rent, since they are most likely to invest in home improvement.

The report recommends a more fluid interpretation of property rights. Conventionally, property rights mean the right to use, develop and transfer property. The researchers advise a different set of property rights for informal housing — one that allows the owner-occupant to develop the land, inherit property and get basic services as well as formal mortgage from banks or financial institutions.

The government could also permit the owner-occupant to have only the right to use the property and access basic services as in public housing. Alternatively, it could give property rights on lease. It could also restrict use and exchange of such property to only between low-income groups.

There are six categories of slums in India — unidentified slums, identified slums, recognised slums, notified slums and unauthorised housing.

The report groups informal housing into three segments. First, insecure housing (unidentified slums), where people have no property rights and are most vulnerable to eviction. Secondly, transitional housing (identified slums and recognised slums), which exist in government records and are gaining de facto rights or the right to use. Third, secure housing (notified slums and unauthorised housing) where people do have some property rights and can't be evicted summarily.

The report looks at each category separately and analyses what can be done. It is possible to have slum free cities: as the report points out informal housing hasn't been expanding in cities.

"During the slum mapping and survey, while we actively looked for new slums that were less than five years old, we found very few," say the researchers. Urban development experts and NGOs backed their observation. There wasn't any land in the city to encroach on as owners were protecting it. "As an example, only one percent of slums in Hyderabad were less than five years old as of 2013," say the researchers.

Individual toilets, sewage connections, drainage and water connections are the priorities of people in slums

What the FSG report is proposing is more in line with what city governments are known to be comfortable with — giving slums access to services and basic property rights rather than freehold rights. The impact would be to increase the stock of affordable housing.

In fact, slum residents are keen to invest in home improvement. Nearly 82 per cent, including those who faced a high risk of eviction, told the researchers that they wanted to spend on improving their living conditions. In Delhi, where fear of eviction is the highest, 75 percent of residents wanted to build brick walls and individual toilets. Most slums weren't shanties but consisted of *pucca* and semi *pucca* housing, say the researchers.

Slum residents do have the money to invest. They are a 'vibrant lot' says the report. "More than 75 percent of families in this segment (except insecure housing families) own a TV and a mobile phone. An estimated 75 percent of informal housing families live in *pucca* homes. Their median self-reported household incomes are probably higher than the World Bank's poverty line," says the report.

But owner-occupants can't get formal mortgage finance since they don't have property rights. A Delhi High Court judgment bans banks and housing finance companies from financing houses that lack formal approvals.

So, personal savings and informal loans are used to improve homes. Nearly 30 percent of microfinance loans are taken for housing. People construct incrementally since the loans they can get are small. They spend on building brick and cement walls and a toilet. What they ask for are sewage connections, individual water connections and drainage. They also want roads and garbage collection. Medical facilities and transport are ranked lower than these immediate needs. Without formal property rights they cannot demand services from the government except under welfare schemes.

Governments are providing services to informal housing. According to the 2011 Census, 91 percent of households in slums have access to electricity, 65 percent have access to water taps, and 66 percent have individual toilets.

But the quality and quantity of these services is poor. Nearly everyone has access to electricity but not to individual metered connections. Most residents have to use community toilets, except in Hyderabad. Yet 87 percent want a private toilet. People also spend hours trying to collect water from community taps. Water supply is irregular and inadequate.

Since it is difficult to get trunk infrastructure into transitional housing settlements, the report recommends decentralised sewage systems, such as small-bore sewerage systems that can either discharge into the municipal trunk sewerage network or to a treatment plant set up near the settlement.

Clean drinking water can be provided through decentralised water filtration plants set up by companies and NGOs like APMAS, Eureka Forbes, Sarvajal, WaterHealth India and Waterlife.

There should be a tap in every home. Since water supply is erratic, a storage tank could be built along with a water pipe network that would provide water to each home. ■

KERALA'S GI HUNTERS

Chengalikodan banana, Pokkali rice, Travancore jaggery, Valakkulum pineapple on their way to fame

Shree Padre
Pattambi

CHENGALIKODAN is a banana with a venerable past. An ancient document from a Tharavad household in Kerala mentions its history. It says Chengazhikodu was a tiny kingdom which was under threat. The rulers enlisted some families beyond the boundaries of their kingdom to stave off the enemy. When the war was over, the rulers suggested the families stay on and cultivate bananas. That's how the Chengalikodan banana got its name.

"It is a unique banana, sweeter than other *nendran* varieties and quite apart in looks and properties," says P.V. Sulochana who served for 15 years in Erumapetty panchayat in North Thrissur from where the banana originates.

The Chengalikodan banana now has a Geographical Indication (GI) tag, raising its profile and price. So do Pokkali rice which grows in saltwater, Travancore jaggery, rich in sucrose, iron and magnesium, two scented varieties of rice called Jeerakasala and Gandhakasala, and the Valakkulum pineapple, named after the place it originates from.

Altogether seven unique plant varieties in Kerala have received GI recognition thanks to the earnest efforts of the Intellectual Property Rights (IPR) Cell in the Kerala Agricultural University (KAU). Led by the redoubtable Dr C.R. Elsy, a plant breeder professor, the IPR Cell has been scouting fields and farms in Kerala to identify breeders of unique plant varieties.

Another four GI recognitions are in the pipeline. That's not all. The IPR Cell has succeeded in getting 17 Plant Genome Saviour Awards given to farming communities and farmers for conserving and propagating unique plant varieties.

In 2014, 37-year-old N.M. Shaji, secretary of Pain and Palliative Care, an 18-year-old NGO in Wayanad district, received the Plant Genome Saviour award for his unique collection of tubers. Shaji believes that lifestyle and food habits need to change to counter the rise in cancer cases and that the past provides many lessons. His forefathers, he recalled, consumed tubers. For 12 years Shaji travelled across Kerala, looking for tubers. Today his prized collection surprises even tuber scientists. It was the IPR Cell that identified Shaji's achievement and enabled him to get this recognition.

NM Shaji with his prized collection of tubers from across Kerala

ORIGINS OF THE IPR CELL

More than a decade ago, the Indian Council of Agricultural Research (ICAR) directed all agriculture universities in India to constitute an IPR Cell. The job of the cell was to investigate, apply and facilitate protection of agriculture-related IPR. Three areas came under its purview — GI, Plant Genome Saviour Awards and registering unique plant varieties under the Protection of Plant Varieties and Farmers' Rights Act, 2001 (PPV & FR).

Registration of farmers' plant varieties and decisions about the Plant Genome Saviour Awards is done at the Protection of Plant Varieties and Farmers' Rights Authority, under the Ministry of Agriculture, which is based in Delhi.

Dr Elsy with her colleagues at the IPR Cell at KAU

The Geographical Indications of Goods (Registration & Protection) Act, 1999, came into force in 2003, an outcome of talks at the World Trade Organisation (WTO) of which India is a member. The Intellectual Property Office in Chennai processes GI applications and takes decisions. The IPR office comes under the Union Commerce Ministry.

How many agriculture universities have functioning IPR cells is not known. But the one at KAU is in the forefront. Its performance in two areas of recognition for farming communities — the GI and Plant Genome Saviour Awards — is truly outstanding.

KAU formed an IPR cell way back in 2003, even before the ICAR directive was issued. Dr Elsy was placed in charge. But this was not a full-time job. She was also expected to fulfil her routine duties as a plant breeder. Though her colleagues co-operated, the cell didn't have full-time staff, proper infrastructure or financial resources. It started a few awareness projects and began vetting GI applications.

The cell's first GI effort was Pokkali rice, a variety unique to Kerala. It is grown in the coastal belts of Ernakulam, Alleppey and parts of Thrissur district where saline water intrudes into the land. Since the field is always doused with saltwater, using chemical fertilisers is futile. So this rice variety is always organic. Farmers go in boats to harvest it.

What attracts farmers to Pokkali rice is an associated activity — fishing. Generally, rice is grown alternately with fish, in this case prawns. However, urbanisation is shrinking land under Pokkali cultivation. In 2007, the GI tag was granted to Pokkali rice. "Since we were just beginning, it took us a year to study the Pokkali system of cultivation on one side and the procedure of applying for GI on the other," recalls Dr Elsy.

The cell's next success was the Valakkulum pineapple. In 2010 Dr Elsy and her colleagues succeeded in getting GI tags for two famous, scented rice varieties of Kerala — Jeerakasala and Gandhakasala. For both, the acreage under cultivation has been declining.

In 2013, KAU prepared a blueprint for gearing up the IPR Cell's activities and sent it to the state government, pinpointing its successes. The government was impressed and sanctioned annual financial support. The IPR Cell now submits its proposal every year and after perusing it the government authorises financial support.

This has made it possible for the IPR Cell to hire two research assistants on contract. The cell was earlier functioning from KAU's headquarters in Mannuthy, Thrissur, for two years. Recently, Dr Elsy was transferred to Pattambi Regional Agriculture Research Station (RARS) so new research assistants had to be hired.

With Central Travancore jaggery, Kaipad rice and Chengalikodan *nendran* banana receiving GI recognition, the IPR Cell has obtained seven GI tags for Kerala. Four more are in the pipeline — for Nilambur teak and teak products, Tirur Vettila (betel leaf), Kuttiattoor mango and Marayoor jaggery.

PLANTING THE IDEA

How does the IPR Cell get a GI tag granted? "We first identify a probable candidate for IP protection," explains Dr Elsy. "The candidate might have been found by us or proposed by any farmer group."

One criterion that the cell ensures at this stage is that its efforts should benefit the larger farming community. If such chances are bright, a meeting of all producers of the concerned area is convened. Matters such as provisions for GI registration, benefits of protecting IPR and so on are explained. "If you are interested, we can support you, is what we tell them at the end of a preliminary meeting," says Dr Elsy.

If the community is keen, a producers' society is registered before beginning the groundwork and paperwork. The cell's work then becomes easier. It has to interact only with the president and secretary of the society. But the formality of registering a society itself takes nearly a year. For instance, it has taken more than a year to form the Tirur Betel Farmers' Society.

A bigger task is proving the uniqueness of a particular plant variety. During talks, local people attribute many specialties to their product. But getting scientific validation is not easy. "In many cases we don't get any written document to indicate how old the variety is or its uniqueness," explains Dr Elsy. "There is a clause that says GI can be granted based on the fame of the products too," she adds.

How many agriculture universities have IPR Cells is not known. But the one at KAU is at the forefront.

To prove the qualities of Travancore jaggery, the cell got it analysed and compared to other kinds of jaggery made in Kerala. The Travancore jaggery proved to be richer in sucrose, magnesium and iron, factors which worked in its favour for getting the GI tag.

Similarly, in the case of scented Jeerakasala rice, the IPR Cell compared its aroma to rice varieties grown in other states and found it to be unique. For both Jeerakasala and Gandhakasala scented rice varieties the cell was lucky to get its hands on old Malayalam poetry that lucidly extolled the qualities of both varieties.

The Chenkalikodan banana was compared to the other *nendran* varieties. The banana differed in many oraganoleptic characteristics. This banana has a long red patch of colour on the skin, and becomes so soft while cooking that it extrudes from both ends. It doesn't have a ridge. Plus, it is sweeter and its skin thinner. The Tharavad document helped the IPR Cell prove the banana's uniqueness and origin.

The process of getting GI recognition for Nilambur teak and teak products is in its final stage. "The College of Forestry at Nilambur has already done studies on Nilambur teak and has enough data. This came in handy for us. In all the other cases, we had to start from scratch," says Dr Elsy.

Sometimes luck also plays a role. For the Tirur betel vine, the panchayat had documents. But the cell is still scouting for documents to prove the qualities of the Marayoor jaggery.

MAPS AND PROCESS

A certified map showing where the product is grown is another document that has to be submitted. In some cases, the District Collector certifies this. In other cases, the Principal Agriculture Officer endorses it.

But differences of opinion creep in, as in the case of the Kuttiattoor mango. Some locals argued that the neighbouring Kunhimangalam panchayat should be included in the map because it is cultivating the mango. "In such a situation, we convene a meeting of all stakeholders and proceed only after they reach a consensus. We try to be objective and do justice to all concerned. The GI obtained through KAU is completely transparent," says Dr Elsy.

Beeran Kutty with his amazing betel vines

Cheruvayal Raman grows 52 indigenous varieties of rice

If there is a strong local team or agency the cell's job becomes easier. In the case of Nilambur teak, there was a local agency so Dr Elsy visited the area only two or three times. Otherwise, multiple visits are required.

The IPR Cell has also taught itself over the years on how to process GI applications. When the first GI application had to be submitted there was utter confusion. Nobody knew the right method. The cell approached lawyers. They asked for a fee of ₹40,000. Funnily enough, they too had no experience in submitting such applications and the IPR Cell had to constantly step in. Finally, the lawyers succeeded in just about filling in the application form.

"We were in a fix. We didn't have the money to pay. Neither did our farming communities. There was also no way they could recover this money had they managed to pay it," recalls Dr Elsy.

So she bought the GI Act book and thoroughly studied it. The cell now has enough experience not only to file its own applications but to advise others. "In fact, our first application was appreciated by the officers at the IPR office in Chennai. Currently, lawyers charge around ₹60,000 to 70,000 for processing one application," says Dr Elsy.

Along with the GI application, a logo for the product has to be submitted. To get people involved the cell conducted two logo competitions, for Pokkali rice and for Chengalikodan banana. The logo for their latest case — Nilambur teak — was also appreciated at the IPR office.

THE PLANT GENOME SAVIOUR

The Plant Genome Saviour (PGS) Awards were launched in 2007. Initially, the awards were given only to farming groups. The IPR Cell got PSG Awards for Akampadam Chimpachala Padasekara Samithy (twice), the Palakkad and Pokkali Rice Farming Community in Ernakulam district and the Chengalikodan Banana Growers Association in Erumapetty, Thrissur. The award money is ₹10 lakh for a group and ₹1 lakh for an individual. The effort required to get the PSG Award is less strenuous.

"If a farmer has conserved 10 to 20 varieties of a plant albeit for commercial purposes, it can be considered for the PGS Award. It doesn't matter if they have brought these plant varieties from different areas," says Dr Elsy.

The 13 individuals who received the PGS Award through the efforts of the IPR cell have impressive records of conservation of different plant varieties, that too

The famed Chengalikodan banana

with social commitment.

Shaji, for instance, was deeply concerned that young people between the ages of 25 and 35 were getting cancer. Born in the third generation of a settler family from Ernakulam district, he learnt that it was consumption of tubers that helped his forefathers live long, energetic lives. Since his forefathers were only tenants they were given just a small portion of the paddy they cultivated on the landlord's fields. They couldn't afford to consume more rice. Naturally, a wide variety of tubers became their staple food.

He has some tubers dating back to those years. His collection of rare tubers includes varieties like Nuroo, Arikelang, Naro Pullathi, Chore Kachil, Gandhakasala Kachil, Kappa Kachil, Choriyan Chemb and Makkal Pothi Chemb.

The PGS Award has brought him much-needed recognition. Every day around five people, including students, farmers and scientists, visit his one and a half acre farm. "The very same society that ridiculed me as a lunatic now appreciates what I have done," says Shaji with a sigh of relief.

Cheruvayal Raman, 68, of Wayanad is another recipient. He painstakingly grows 52 indigenous rice varieties on five cents of land every year. Raman has studied uptil Class 5. His uncle, who brought him up, disliked hybrid rice varieties. When the uncle passed away in 1989, he left behind four to five local varieties of rice as a foundation for Raman to build on.

Raman grows 52 varieties organically. He gives away one or two kg of paddy every year for harvesting seeds. The only condition is that the recipient must grow the variety and pay by giving back some of the seeds.

"Only a few persons keep their word," says Raman. "But awareness is growing. Students and interested visitors keep coming to my farm. I go to different meetings, to colleges and so on to spread the message of rice diversity and the importance of conservation."

Benny Mathew, 47, of Palakkad district, another awardee, wanted to acquire a large collection of pepper varieties since childhood. Some years ago he noticed new varieties growing on his land. They had come through bird excreta. That incident inspired him to search for new cultivars, mostly from the wild. Today his one hectare hosts 205 pepper varieties. "Some are very promising. I hope to release a few for farmers in the coming years," he says with pride. He claims to have developed a few new varieties too.

Then there is Sajeevan Kavumkara. He has been running the Eleyariv (Knowledge about Leaves) campaign for decades. His focus is on utilising edible leaves and local crops like tubers, mango, jackfruit in place of vegetables and fruits bought from the market. During his meetings Sajeevan demonstrates how food from local plants is cooked, thereby encouraging the spread of this culture.

His homestead in interior Kannur district has hundreds of such plants, some cultivated and others wild. "Kerala homesteads can grow our own vegetables this way with a little effort. If we start using native edible leaves and crops we will help maintain biodiversity and our health," he says.

"Kerala has many more individuals who are eligible for PGS Awards. Conserving paddy varieties is tough and needs a lot of time-bound work every year as compared to collection of other crops," Dr Elsy points out.

Marayoor jaggery being stirred

"In India, Karnataka is leading in GI registration. The state has got 38 GIs out of which 16 are agri-related. Maharashtra stands second with 26 GIs," says Chinnaraja G. Naidu, Assistant Registrar of Trademarks and GI, Chennai. "But as far as GIs obtained through state IPR Cells is concerned, Kerala stands on top. The only other state IPR Cell that has initiated the GI process with us is Assam. It has filed two applications. No other state IPR Cell has applied for GI so far. The KAU Cell is conducting good awareness programmes too. I myself have taken part in one or two."

LITERATE FARMERS

However, Prof. R.R. Hanchinal, Chairperson, Protection of Plant Varieties and Farmers' Rights Authority, Government of India, New Delhi, is far from impressed. "If Kerala has bagged a lot of PGS awards, the credit goes to the literate farmers of that state. The PGS Awards are recognitions and don't come under IPR. The Kerala IPR Cell has to gear up applications of farmers' varieties. The agriculture universities and Krishi Vigyan Kendras all over the country are creating awareness about farmers' rights over plant varieties. Yet the overall performance is disappointing. Jharkhand has applied for 2,066 farmers' varieties and Chhattisgarh for 1,744. Bigger states like Karnataka have applied only for 192 and Kerala for just 54. Kerala is such a biodiversity hotspot. Far more applications should have been initiated from there."

Dr P. Rajendran, Vice-Chancellor of KAU, agrees that Kerala probably has many more eligible cases for IPR protection, considering the state's biodiversity and its enterprising farmers. But the IPR Cell's achievements are impressive. "We bagged seven out of 17 PGS Awards in 2013 and four out of nine in 2014," he points out.

But, as far as farmers' plant variety registration is concerned, he says the university has a limitation of resources. "We can't shoulder all the responsibilities. If the Agriculture Department takes up the rest of the work, we can analyse and offer scientific support for the claims made," he says.

Dr Elsy cites other issues pertaining to farmers' plant variety registration. "Registering a variety in a single farmer's name when it is grown by many is not fair. Identifying the areas in which one variety is grown is tough. Kerala is such a sensitive state that any wrong move will boomerang."

Though the mandate for the IPR cell is just to file the papers and get it processed, Dr Elsy and her team voluntarily follow the case further. For example, before PGS Award presentations, they ask for planting material sample, photos of the award-winner's activities, and so on. "For farmers, even though they are literate, filing the necessary papers in the right way and following those up isn't easy," she says.

MARKETS FOUND AND LOST

The PGS Awards are often announced at the last minute. Then there is a scramble for train tickets. Dr Elsy opts to travel with the farmers instead of taking a flight so that she can help out with language and other issues.

When the IPR Cell started 15 years ago, many among the faculty saw it as an unnecessary burden. "They believed the university's responsibility was limited to increasing crop production. The very same section has now realised that we have to support farmers even in protecting their rights," Dr Elsy observes.

The Kerala Governor, hearing about the KAU IPR Cell's achievements, invited all award-winners to Raj Bhavan, to honour them. The MS Swaminathan Foundation at Wayanad also honoured them.

But does GI protection benefit the farmer? "This is a question we invariably encounter. My answer is simple. Think like this. You own some land. If you just sit back carelessly, thinking you have the document records, you are taking a risk. Instead, if you erect a proper fence all along the land, you will establish your ownership. Similarly, GI protects your interests regarding your unique product."

Recognition has helped the Chengalikodan banana. Farmers from different parts of Kerala, even from Kasaragod in the far north, are asking for Chengalikodan banana suckers. KAU is producing the banana's tissue culture plants small-scale. Private nurseries have included it in their list.

Chengalikodan *nendran* used to be priced at just ₹2-5 per kg more than the usual *nendran* variety. But, in the last season, the difference in price increased by ₹15-20. Farmers in the adjacent region have already started growing this variety in new areas.

Farmers who grow Chengalikodan have organised themselves into the Chengalikodan Growers Association. One of them has donated land for the society. The team plans to build an office there. "A normal Chenkalikodan banana bunch has 50 fruits and weighs around 25 kg. The harvesting season begins two months before Onam and continues for two more months after the festival," explains K. Vijayan, Secretary of the Chengalikodan Growers Association. "Most farmers cultivate it in an area less than one acre. One concern is this variety is easily susceptible to disease. Yet, in five block panchayats, this variety is being grown on an estimated 2,000 hectares."

Dr P. Rajendran and Dr Elsy receiving an award for recommending the highest number of Plant Genome Saviours in India

The Achilles' Heel of the farming community is marketing and delivery. They are not able to supply their products to clients

Trade enquiries start pouring in once the local media writes about the winners. But the Achilles' heel of farmers is marketing and organising. Be it Pokkali rice, Gandhakasala rice or Travancore jaggery, the farming community is just not able to supply its product in an organised manner. The IPR Cell is now mulling opening a separate office, putting up a website, and raising capital to stock and process such products and sell online.

"Getting a certificate is enough. That should facilitate the farming community in augmenting income. But it requires expert intervention and guidance to train farmers in organised marketing. This area needs very serious action," adds Dr Rajendran.

The performance of the KAU IPR Cell is truly laudable. It has stepped out of its comfort zone to help farmers. What is really significant is its mindset and zeal. Sadly, such commitment is lacking in most of our agriculture universities. ■

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PICTURES BY P. ANIL KUMAR

Harish Mamtani and Manish Kumar at a low-cost private school in Hyderabad. SEED has helped to improve the school's quality of education

Upgrading low-cost pvt schools

SEED has made an interesting beginning

Civil Society News
Hyderabad

PRIVATE school education has been much in demand because most government schools don't do a good job. Everyone can go to a government school, but how does that help when teachers don't perform, pedagogy is dysfunctional and infrastructure sucks? The result is that setting up a private school has come to be seen as nothing less than a great business proposition. There are children and there is demand for anything that is a few notches above what the government offers.

The bigger and better private schools have become brands to contend with. They charge fancy fees and many exotic considerations go into gaining admission. But far from this high-end action, there are also tens of thousands of small private schools mushrooming in remote neighbourhoods across the country where the less fortunate are compelled to go. Because of their accessibility, they are the real substitutes for government schools but, in fact, aren't significantly better. Demand keeps them running and yet financial sustainability, hiring teachers, maintaining buildings and so forth are challenges they are faced with. For many promoters, such schools become a burden they would happily dump if they could.

This is where Manish Kumar, 34, and Harish Mamtani, 50, have decided to step in and use their entrepreneurial skills to put these low-cost private schools through a transformation. It is an end-to-end approach in which they fix the finances of a school, upgrade teaching, improve learning outcomes, introduce new technologies and establish better managerial practices. The idea is to give children from modest homes the equivalent of the best at an affordable price and ignite in them the desire to learn and go on to college and so on.

In 2013, Kumar and Mamtani created SEED Edu Corp (India) Pvt Ltd for which they have raised funds from social investors, the Acumen Fund being one of them. SEED stands for Standards of Excellence in Education and Development. There are three schools with altogether nearly 1,300 students that SEED runs in Hyderabad. The intention is to institutionalise the changes it is making in these schools to serve as a better model for the low-cost private school and thereafter scale it up.

SEED is essentially a school management company. Profitability matters as it is important to be sustainable. But a key component of the return on investment is the social impact the schools are expected to have. They are meant to transform lives through better quality education.

Regulation in India requires that schools be societies and not for profit though they are, in fact, money-making machines. The SEED Schools approach is interesting because it turns this situation on its head. SEED Edu Corp is a business with a dominant social purpose of creating low-cost and affordable private schools that have high standards. The three schools it works with in Hyderabad outsource their requirements to the company, which infuses into the schools new efficiencies, best practices, better talent and a robust spirit of inclusiveness.

The three schools are nondescript and not in the well-off parts of Hyderabad — Abhyudaya High School, St Sai Grammar School and Sreenidhi High School. They serve families with modest incomes. The schools are in rented premises, so there isn't the grabbing of land that is associated with private educational institutions. The fees are just ₹1,500 a month. Recently, crowdfunding was used to award scholarships to orphans.

The transformations in these schools are meant to go deep and endure over the long term. A generation of children who might have been lost to poor schooling is almost certainly finding a whole new meaning in getting educated. They are encouraged to explore and comprehend. Group activities promote teamwork. English is the medium in which they learn and express themselves. Children also get to use computers and experience digital learning so that they are technologically empowered. Teaching skills are being enhanced. Since inclusion is a clear goal, problems of caste and economic status are being addressed.

The school buildings are clean and there are hygienic washrooms. Parents are encouraged to be engaged with the schools.

The company also enriches the education space through the diverse group of professionals it has succeeded in bringing together as a core group. These aren't people *Civil Society* has spent time with but their profiles are interesting. Satish Kotra is the Chief Operating Officer and has some 19 years of experience in banking and capital markets, having worked with HDFC Bank and Citi. Shivani Dhavalikar has a degree in economics and has taught in a low-income school in Pune. Aarti Mandhania is a trained psychotherapist who works with children. Renuka Boorgula was an architect before she made the shift to education and worked in the UK and India. Swetali Mahapatra comes with a degree in computer science and exposure as a teacher for two years in a low-income private school in Hyderabad.

Civil Society first came across Mamtani when he was an adviser to Gray Ghost Ventures, a social venture fund. He has spent a long time in the US, having gone there as a boy and then worked his way through an education.

Children at the computer learning class

Girls in their neat classrooms

The idea is to give children from modest homes the equivalent of the best at an affordable price and ignite in them the desire to learn and go on to college and so on

Mamtani has been into finance and wealth management. He has been at Merill Lynch, Morgan Stanley, Bank of America and Bluefish Capital. He serves on the board of the Atlanta CEO Council. He is also on the board of the TiE Global Board of Trustees.

He has middle-class origins and when he comes to Delhi it is invariably to visit his parents in Lajpat Nagar. He is a quiet and personable man with a gentle manner. In his preferences he comes across as being deeply inclusive and respectful of money.

The idea of SEED Schools came to him when he was the interim CEO for the Indian School Finance Company (ISFC), which lends to low-cost private schools so that they can expand and improve infrastructure.

Mamtani realised that money alone was not enough. Low-cost private schools needed a range of services to raise the standard of education they were offering. It was better teaching, curriculum, management and so on that would make them more impactful.

Kumar was also at ISFC and it was there that the two got together over the SEED Schools idea. He had been there for four years from the early stages of the company and played a role in driving its business strategy and taking it to 600 schools across India.

Kumar comes from a remote part of Bihar. But he has been to IIT Bombay and taken an MS degree from Georgia Tech in Atlanta. At 34 he is young and passionate about education, so much so that he took up teaching as a volunteer for two years in a low-cost private school.

At the SEED office at Banjara Hills in Hyderabad, just behind the Harley Davidson showroom, we get Kumar to talk about SEED and himself. It has been a whopping detour from being a highly-qualified engineer well on his way to a well-paid job in a large corporation to the role he now has as co-founder and CEO at SEED.

Like Mamtani, Kumar comes across as understated and gently paced. Both are obsessed with giving back to society, having got a lot for themselves out of life. There is a strong personal quotient in their involvement with the business and it manifests itself over multiple conversations.

Kumar remembers the time he was an extremely poor student. He was no good at maths and kept failing. His father would teach him and the other siblings and Kumar was just too scared to ask questions. "They had all but given up on me. But I remember the day I took courage and said I didn't understand something. My father explained it again and something clicked in my head."

So, SEED Schools has very special meaning for Kumar and Mamtani because it is an opportunity to help children exercise their right to know and learn in a free and creative environment. Usually, low-cost private schools are for those who can't hope to do any better — perhaps third, not even second best options. The SEED mission is to make them among the best. ■

AJIT KRISHNA

Shrikant Sinha: 'Our conferences are serious learning experiences'

'Companies are keen to measure impact'

Civil Society News
New Delhi

THE increase in funds for Corporate Social Responsibility (CSR) has led to a multiplicity of conferences and award ceremonies, prompting questions on whether they serve any purpose at all, or whether, like a lot of CSR, they are more about window-dressing than substance.

The Nasscom Foundation's CSR conference for 2017, its fifth year, concluded recently. *Civil Society* spoke to Shrikant Sinha, the foundation's CEO, on what the learning has been from bringing together companies, NGOs and government officials in an interactive environment.

The Nasscom Foundation's CSR conference has become a little institutionalised. It happens every year. What is it that you are seeking to achieve?
There are three things we are trying to achieve. The first is we want to help the corporate world and NGOs understand how the 2 percent CSR (funds) would mature over the years. Second, how the initiatives of the companies should align with the SDGs (Sustainable Development Goals), of which India is a signatory. The major focus for us is a buy-in from companies and the NGOs and how people can start working towards SDGs.

So, you want your conference to be a serious learning experience?
Absolutely. Let me talk about the third objective. Year on year, we have been changing the conference to suit the audience and ensure that it is a serious learning experience. It is an opportunity for collaboration between companies and NGOs. Nasscom Foundation, because of its connections with industry and NGOs, is able to bring them together.

A handshake opportunity?
Much more than a handshake. I'll give you an example. Companies in Pune know that the city has three to four major problems. So they have come together and formed Pune City Connect. It is working with companies, the Pune Municipal Corporation and NGOs to make sure that problems get resolved by 2020. This is the kind of case study we want to bring in.

What is the mechanism of the conference?
Let me talk about what we did. We had these walls where we told NGOs to come and display their material so companies get to know the things that are happening. One of the key goals of the conference is to generate serious learning so that companies do better CSR and people who can facilitate that from the social sector are aware of what they can do for companies.

Not only that. There were government officials there as well and social entrepreneurs too — essentially ensuring the complete ecosystem functions. This ecosystem has to be created today. Earlier, a philanthropic grant was given and the company forgot about it.

Companies are now maturing and saying, Look, what is my social return on investment? NGOs have not had any kind of exposure on how to report that. NGOs need to address transparency.

Are you saying these are issues raised during the conference?
Exactly. One of the things discussed in one of the panels was volunteering. How NGOs can actually benefit from volunteering efforts. But it isn't just plain and simple volunteering. When the Digital Melas happened these people were trained, they volunteered to train other people. We said, If you are most comfortable doing SBI Buddy, train on Buddy. No one is saying you have to train on Paytm or anything else. Whatever your core competence is, you can train on that.

The second point is skills. We are talking about a Bachelor's in vocational studies. In your final year, you decide whether you want to go for the vocational stream or you want to get a degree like a B.Com. How would industry take this up. Another thing that came up was that a lot of companies today want persons with disabilities. There is the same pool that keeps rotating across various companies. Training happens for the same people again and again.

How do you mean?
For example, under CSR you want to train 100 people with disabilities. So, you go to the people who are trained to skill these people and they will say, okay, you want a batch of 100, I will give you 100 (and) we will train them on that. Fine. You do things, they come. There is a residential programme, they get a stipend also. Training happens for them.

The next time a second company comes and says it would like to train people with disabilities and needs a batch of 100. The same people who were there before are there again because no one knows what are the total number of persons with disabilities, where they are located. But the people who have not been trained require it most.

What you are saying is that when you go to a limited number of people, a whole lot of people are excluded. So how does your conference help in increasing this bandwidth?
One is awareness. Second is getting the right people into the room. Today companies want to utilise their money in a creative manner. They want to come up with new ideas and see how it can help the last mile and the grassroots to scale up. They want to empower people through digital literacy or through financial literacy or even through providing access to health and sanitation.
We also try to burst certain bubbles. For example, a lot of money goes into education, into creating a parallel education system which is counter-intuitive. Money going into helping the current education system is what is productive and your returns on money invested in this way are higher. ■

No shortage of enthusiasm

BACK TO SCHOOL

DILEEP RANJEKAR

THE journey from Bhimtal to Pithoragarh was punctuated by beautiful *burans* trees (*Rhododendron arboretum*), the state flower of Uttarakhand. My colleagues in Uttarakhand described various facets of the flowers including how useful and tasty their juice is. Just the previous week I had witnessed the colourful state flower of Rajasthan — *rohida* (*Tecomella undulata*) — in Barmer district and my colleague there, who was from Uttarakhand, had told me that on the coming Uttarakhand visit, I would be seeing *burans* flowers in abundance. I promptly sent my pictures of *burans* to my colleague in Rajasthan.

But for a few stretches under maintenance, by and large the roads were of high quality though very narrow and dangerous in parts. Whenever I travel in the hills, I always wonder how the Border Roads Organisation (BRO) maintains the roads despite huge challenges — frequent landslides, rain and the vagaries of climate. After arduous travel of about two and a half hours, my colleague suddenly spotted a motorcycle belonging to one of our team members outside a school he was familiar with. He phoned him and confirmed it. After seeing pictures of the classrooms on his mobile and some hesitation (since we were delaying our arrival at Pithoragarh), we agreed to visit the school. What attracted me the most at the outset was the school's absolutely stunning natural environs and the slogan on its entrance: '*Shiksharth Pravesh — Sevarth Prasthan*' (loosely translated as 'Enter for education — Depart to serve').

The school had two distinct buildings — the first one for higher primary and the other for lower primary. It was lunchtime and the children had just begun their meal. Asked what the menu was, the response, in a chorus, was, "*Dal-bhat.*" When we asked for the difference between '*dal-chawal*' and '*dal-bhat*' the instant response was, "*Chawal* is uncooked rice, *bhat* is cooked rice." Children in both lower and higher primary were energetic, smart and highly responsive. The toilet was among the cleanest I have seen in government schools. The credit for all this obviously went to the two teachers. The teacher in lower primary had been attached to the school for the past four years. A longish conversation with her brought out her deeper engagement with the children and her burning desire to see her children develop differently.

The impressive teaching-learning material in the classrooms and the nicely preserved notebooks of students with immaculate cursive English writing by Class 2 and Class 3 students was truly impressive. It couldn't have been possible without intense effort by the teacher. The only dark lining to the silver cloud was that the teacher felt she now needed to be transferred to a school whose location was more convenient. She was very unhappy that she had no method of addressing her grievance.

On our journey the very next day from Pithoragarh to Munsiyari, on a wet, cold day, we had difficulty finding our scheduled halt at a place called Chhoribagari where our team in Pithoragarh district was holding a workshop with a group of over 30 teachers from schools in the surrounding block. We had to backtrack for about five kilometres to find the place — a primary school — about 400 metres away from the main road. Braving the rain, the distances and freezing wind, 27 teachers along with the block functionaries were present. When we reached, they were summarising their experiences in the workshop. The rain had intensified but I did not see any worry about the journey home on any face. They appeared very keen to continue the interaction.

Heavy snowfall greeted us at Munsiyari where the temperature was –2 degrees C. A quick intake of onion *pakoras* and several cups of hot ginger tea helped cope with the spine-chilling cold, since the hotel had no means of heating the rooms. Our team members in the district were busy contacting the teachers for the next day's meeting, scheduled for 11 am, and appeared unaffected by the weather conditions. Everything depended on the extent it would snow overnight. The news the next morning was that three of the five main roads from where the teachers were to travel were cut off due to snowfall.

Despite the odds, around 50 (of the 65 invited) teachers and education functionaries made it and the discussion began just about 10 minutes past the scheduled hour. There were WhatsApp messages from many of the absentees about their inability to reach due to road closure. The discussions revolved around unique experiences and challenges with children and in schools. The emergent tone was centred on teachers' role in shaping the development of children so that they become responsible members of society. Most teachers raised a common issue — that it was difficult to seek cooperation from parents since they were either too occupied with their livelihoods or were unable to contribute to their children's education due to their own illiteracy.

DILEEP RANJEKAR

The classroom in the school on the way to Pithoragarh had impressive teaching-learning material

Someone mentioned that I was a member of the Central Advisory Board of Education (CABE) and some of the teachers thought it was the right forum to state their difficulties and understand the policy issues of the government. The first question related to the difficulty emanating from paucity of teachers: "Why can't we get a separate classroom for each grade and a separate teacher for each classroom?"

Another question was about creating a strong network with parents to be able to work with the child in a cooperative manner. There were the usual discussions about examination orientation in our current education system, the issues arising due to the no-detention policy, the strong need to build capacity for continuous comprehensive evaluation, and so on. Many of them complained about the time they spent on midday meals, unrelated surveys and non-academic tasks. They raised issues of non-implementation of the government's own commitments, policies and programmes. Most of their questions, clarifications and indirect demands were extremely relevant and reflected their commitment to doing something good.

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Mumbai's chance to reform

CITY LIFE

APARNA SUNDARESAN

THE dust has finally settled on the Maharashtra municipal corporation elections which witnessed several twists and turns. The BJP emerged the biggest gainer in the state with a 300 percent increase in seats across major cities. Several voters voted for the BJP with the hope that with the 'same' government from *Dilli*-to-*gali* (national to local), policy and growth paralysis will reduce, and their lives will improve. But for citizens the story appears to be frozen in time.

India and its cities, by and large, are stuck between medieval and modern times. Arguably, cities are the engines of growth and jobs, and contribute the maximum to the country's GDP. To strengthen India, it is imperative to fortify our cities which are currently creaking, and tied down by social, political and economic factors. There exists a palpable anger among citizens about deteriorating infrastructure and services, unchecked corruption and lack of urban planning or accountability. Our cities have shown little resilience when it comes to dealing with natural calamities and contingencies, be it the Chennai floods or the Mumbai terror attacks. Mercer's Quality of Living 2016, ranks Indian cities very poorly in terms of quality of living — Hyderabad ranks highest in India, at 139 among 230 cities. Mumbai and Delhi lag far behind at 152 and 161, respectively.

For our cities to be rejuvenated, urban local bodies will need to be given full autonomy, and control of their finances. In Mumbai, for instance, the city's administration has been fragmented across multiple agencies with much crisscrossing of responsibilities. There are at least 17 agencies who own and disown the duties of Mumbai at the same time. The absence of a 'single throat to choke' translates to lack of accountability. The chief of the municipal corporation is the municipal commissioner, an appointed bureaucrat, who reports to the state and not to the city's mayor or elected representatives. The mayor is just a figurehead, with the perks of a grand sea-facing bungalow in Mumbai, which too may change.

Even 25 years after the 74th Amendment to empower local governments, change has been slow. Delegation of power has been insubstantial, with a disclaimer and a range of questions about its implementation.

The only way forward is to truly enable urban local governments to function. Devolution of power should cease to be discretionary for the state. The state governments must allow for directly elected and empowered mayors who can function as the executive head of the city. The post of the municipal commissioner should be abolished or redesigned to report to the mayor as his/ her Chief Executive Officer (CEO). The mayor should have the power to plan, delegate and decide on appointments, departments and agencies to look at the city's development holistically.

> **Mumbai's mayor is just a figurehead with perks of a grand sea-facing bungalow.**

The autonomy of municipal corporations should be complete and encompass functions, functionaries and finances. Unless local bodies are given responsibility to connect the dots, cities will continue to suffer.

Cities should be allowed to raise funds and determine how to allocate them based on development needs, with little intervention from the state. Most cities, especially the ones that are not state capitals or are new, are currently dependent on the state governments for funds, which have been consistently depleting. Frivolous promises made for political gain do not help either — for instance, the Shiv Sena's promise to exempt property tax for apartments less than 500 square feet in Mumbai.

While several city governments struggle with access to funds, Mumbai is the richest corporation in India with an annual budget of over ₹37,000 crore and an ever-growing fixed deposit that has crossed ₹51,000 crore. It is another matter of concern that there has been no external audit of its accounts for years and several budget heads are opaque.

Transparency in governance should be sacrosanct. It is imperative that local governments incorporate use of technology meticulously in their functioning and proactively publish quarterly revenue-expense and project reports. Fascinatingly, transparency received a lot of limelight thanks to the Economic Survey of India 2016-17, that was released amidst the election campaign. Mumbai's municipal corporation was ranked number one among other dismally performing cities in transparency, accountability and participation. It is unfortunate that the fallacy of this claim remains unchallenged.

The Right to Services Act introduced by Devendra Fadnavis, chief minister of Maharashtra, has been a step in the right direction for accountability and timely, quality services for citizens. This needs to be strengthened across municipal corporations with unambiguous assignment of roles and responsibilities and service-level benchmarks.

A two-way accountability process with checks and balances is a must for any system to be functional. The Brihanmumbai Municipal Corporation had introduced the concept of Advanced Locality Management (ALM) involving citizens for better management of garbage and surroundings. Apart from a few functional ALMs, most of them languish today. If the institutional framework facilitates and boosts Mohalla Committees or Area Sabhas (at the granularity of polling booths) in each ward, in addition to Ward Committees (Mumbai is largely divided into 24 administrative wards) with an elected councillor, Area Sabha representatives (citizens) as members, localities can be upgraded. The Mohalla Sabha initiatives of the Aam Aadmi Party with provision for participatory budgeting are appreciable and need to be replicated across cities and towns.

The Urban Development Ministry is planning a 'City Livability Index' to promote competition among cities and assess them based on parameters that include air pollution, open spaces, education, and so on. Without institutional and governance reform, this will remain a paper tiger. In a stage of impending collapse, unless we look at a time-bound mechanism to empower and revitalise our cities, we will be too late. We already have solutions in place — all we need is political will to create a precedence of prosperous and habitable smart cities. ■

Aparna Sundaresan is CEO of Free A Billion (FAB), a people's movement in Mumbai that aims to empower Indians by creating a popular demand for institutional reform across governments.

No shortage of enthusiasm

Continued from page 25

As a responsible CABE member, I attempted to explain the government's constraints, efforts being made to change the quality of teacher education, committees appointed for various issues involved in improving the condition of government schools across the country, and the like. While they were appreciative of such efforts, they were at a loss to understand how various actions would unfold unless the government almost doubled the budget allocation for education.

In all the three interactions I had during the week, I did not see any deficit of enthusiasm among the teachers and education functionaries despite adversities. And this is not the first time I was experiencing such energy and commitment. In many ways, it was consistent with the general experience in most organisations — most employees join as 'racehorses' — fired up and committed to doing something meaningful; however, the bureaucracy in the organisation, the disabling conditions, lack of resources and lack of opportunities convert them into 'donkeys'. In addition, the persistence of such conditions can seriously affect their motivation and create negative forces.

While we do have to address fundamental issues like pre-service teacher education, in-service teacher development, budgets for education and a plethora of other issues, we should be happy that there is no dearth of enthusiastic teachers and education functionaries in our education system. It is a question of how we nurture them to become the proverbial 'racehorses'. ■

Dileep Ranjekar is CEO of the Azim Premji Foundation

Coalitions are like amoebas

DELHI DARBAR

SANJAYA BARU

POWER politics is not a morality play! That quotable quote may well be found in Machiavelli's tracts but it was a statement I often heard former Prime Minister Manmohan Singh make, explaining the many twists and turns that his precariously perched coalition government had to make to remain in office. If power politics is not a morality play, coalition politics is even less so. The world over.

All those who have had a moral issue with the manner in which the Bharatiya Janata Party (BJP) cobbled together a coalition government in the states of Goa and Manipur should quickly take a course in coalition management. Political coalitions are like amoebas. They constantly change their shape, grouping and regrouping.

No one understands this better than Manmohan Singh. After all, he became Prime Minister in 2004 because the Congress party's bitter rival, the Left Front, chose to extend support to the United Progressive Alliance (UPA), after the election results were announced. The Common Minimum Programme was an afterthought that Sitaram Yechury and Jairam Ramesh put together as a fig leaf that enabled their party leaders to stand together in public.

Then, when the Left Front withdrew support, in July 2008, the Congress Party was quite happy to immediately seek and secure the support of the Samajwadi Party — despite the utter contempt in which Congress President Sonia Gandhi held Mulayam Singh Yadav, after he ditched her in May 1999. At the time Sonia was ready to head a coalition government, with 272 MPs in hand. Mulayam pulled the red carpet from under her feet by denying that he had ever extended support to a government headed by her.

In 2008 I was witness to the drama of the great UPA coalition twist. To be fair, Mulayam was not in it for money. Maybe some of his supporters were. Mulayam wanted to retain political relevance. He went to great lengths, as I have described in detail in my book, *The Accidental Prime Minister: The Making and Unmaking of Manmohan Singh,* to find a legitimate basis for making his political switch. He drafted none less than former President Abdul Kalam to justify his expediency.

Till the beginning of July 2008 Mulayam Singh Yadav rejected Manmohan Singh's major foreign policy initiative, the India-US civil nuclear energy agreement, on the grounds that friendship with the US would upset Indian Muslims. President George Bush was killing Muslims in West Asia. This has made him unpopular among Muslims in India. The nuclear deal would cement closer relations with the US. Hence, reject it. That was Mr Yadav's transparent logic. But, when opportunity presented itself to get a stab at power, and Mulayam certainly hoped to be inducted into Manmohan Singh's government after his vote in support of the nuclear deal, he did a twist.

Was that an act of immorality? Hardly. Remember, power politics is not a morality play. Mulayam did what any politician anywhere in the world would do to get a ministerial berth by adjusting his policies a bit. It was a political act. Mulayam Singh offered his support in exchange for political benefits. That is how coalitions the world over have been formed. The benefits are not necessarily monetary and in Mulayam's case I am convinced it was not so. He wanted a cabinet berth. That is legitimate political bargaining and all coalition governments around the world are familiar with such tactics.

Members of the last UPA government

> **Agility is key to the management of coalition politics. One has to beat a rival before one gets worsted by the rival.**

Those who think that the phenomenon of '*aya* Ram and *gaya* Ram' in politics is peculiarly Indian should get a video of the Danish television series, *Borgen,* and watch every one of its episodes. From Denmark to Japan, from Germany to Britain, every democracy that has had coalition governments knows that coalitions get reconstituted from time to time. Former enemies become friends. Former friends part company. Long before Hollywood thought of the idea of 'friends with benefits', coalition politics did.

The problem with the Congress party is that it has not run too many coalitions to be able to quickly think of ways of creating and sustaining one. In 1996, when the Congress party performed poorly and the BJP emerged as the single largest party, Prime Minister P.V. Narasimha Rao tried to cobble together a coalition that could have allowed the Congress to retain power. Before he could get enough regional parties on his side, the anti-P.V. elements within the Congress, led by Madhavrao Scindia, decided to concede defeat. It was then that a Congress-supported United Front government was formed under the leadership of H.D. Deve Gowda. Apart from the UPA, the Congress has not run too many coalitions. On the other hand, despite the increasingly centralising tendencies within the BJP, that party has had a longer track record of grouping coalitions together. Its deft maneuvering in Panaji and Imphal put the Congress to shame!

For a student of politics what should be particularly interesting is the fact that despite the recent concentration of power within the BJP in the hands of the Prime Minister, the BJP has demonstrated greater agility and its mid-level leaders like Nitin Gadkari and Ram Madhav were able to act with stunning speed. The concentration of power in the Congress has clearly been such that even a senior leader like Digvijay Singh was unable to take decisions on his own. Agility is key to the management of coalition politics. One has to beat a rival before one gets worsted by the rival.

To those who do not understand the currency of power all this might come across as lacking in ethics and principles. But, as Dr Singh would often say, power politics is not a morality play! ■

Strange green ideas

FINE PRINT

KANCHI KOHLI

WILL the Narendra Modi government's flagship projects like Sagarmala — an ambitious port modernisation plan — and the interlinking of rivers help us achieve the universal goals of sustainable development? If one goes by official documents which set the 2030 Agenda for Sustainable Development in India, it is surely a big yes from the government's point of view.

Like many countries, India is committed to achieving the 2030 Agenda by meeting the global Sustainable Development Goals (SDGs). The NITI Aayog is steering the task with comprehensive mapping of several initiatives by different ministries to understand how they correspond to the 17 SDGs and 169 related targets that India resolved to achieve in September 2015 at the UN Sustainable Development Summit in New York.

The genesis: The concept of sustainable development has been defined and debated since the late 1980s and formally adopted as a key driving force for all signatories of the Rio Summit in 1992. Its vagueness has been critiqued, its definition tweaked and invocation interpreted in various policies and judicial decisions in India since then. The National Environment Policy (NEP), 2006, tapped into this concept and so did the Supreme Court decision to allow mining in the Niyamgiri Hills in Odisha in 2007.

The seeds of what the NITI Aayog is attempting to achieve through various ministries and departments was sown at the Rio+20 Summit in 2012. Country representatives and civil society organisations met once again to understand where the world had reached 20 years after it committed to the idea of sustainable development. What has come into force today is a 15-year commitment to "end all forms of poverty, fight inequalities and tackle climate change while ensuring that no one is left behind".

The mapping exercise: The NITI Aayog has undertaken a fascinating mapping exercise of SDGs, and responsible ministries along with various schemes and programmes that will help India achieve its SDGs. The document is titled "Sustainable Development Goals (SDGs), Targets, CSS, Interventions, Nodal and other Ministries" and can be downloaded from its website.

One of the mapping exercises relates to Goal 6 through which we are to "ensure availability and sustainable management of water and sanitation". A target (6.6) under this goal is to ensure that by 2020 all water-related ecosystems including mountains, forests, wetlands, rivers, aquifers and lakes are protected. It all reads fine so far, until the mapping leads you to the two government interventions that are to help achieve these goals. These are — the Integrated Ganga Conservation Mission and the Interlinking of Rivers.

The contradictions start emerging clearly. The interlinking of rivers, always a controversial experiment, has been in the news more recently for the government's push to make sure that the Ken-Betwa project is realised. Many regulatory and conservation concerns were unaddressed, yet the approvals just rolled in with the higher echelons of power wanting to try it out first and do a cost-benefit analysis on its impacts at a later stage.

This experiment, which will divert the "surplus waters of Ken basin to water-deficit Betwa basin", is supposed to provide irrigation to Madhya Pradesh and Uttar Pradesh. This sustainable development will ensure that an important tiger habitat within and around the Panna Tiger Reserve in central India will be impacted. The same area is recorded as a unique vulture habitat, a species already threatened in India. Several lacunae in background studies and impact assessments have been pointed out. This includes questions on the hydrological assessments of the project not taking into account the groundwater-to-surface flow dynamics of the area.

The depletion of groundwater is a huge crisis in India. In fact, the Model Groundwater Bill put out by the Ministry of Water Resources, River Development & Ganga Rejuvenation (MoWR, RD&GR) clearly acknowledges in its May 2016 Groundwater Bill that a serious groundwater crisis is prevalent in the country "due to excessive overdraft and groundwater contamination". But the same ministry has agreed to the interlinking of rivers as an intervention that will help achieve sustainable management of water and conserve water-related ecosystems.

Conflict of interest: The second irony lies in the interventions related to achieving Goal 14, which is to "conserve and sustainably use the oceans, seas and marine resources for sustainable development". Amongst other initiatives, the flagship programme cited to achieve this is the Sagarmala project, launched in March 2015 prior to the formal agreement on the SDGs.

The Sagarmala project aims to develop new ports and strengthen inland linkages through road, rail, inland waterways and coastal routes. The NITI Aayog is a member of the Sagarmala Coordination and Steering Committee (SCSC).

All the six new ports that are under the Sagarmala project will almost entirely replace unique coastal and marine areas as well as threaten the homes and occupations of coastal communities practising fishing, salt production, farming and other livelihoods. These include Vizhinjam in Kerala, Vadhavan in Maharashtra and Tadadi in Karnataka. Each of these areas is also an ecological and scenic delight.

Such large-scale intervention replacing fragile habitats stands in direct contradiction of one of the targets embedded within the same SDGs (14.2). Here, India has committed to "sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts…".

Contradictions are not uncommon in government documents, but the ones discussed above represent a conflict of interest. It is hard to see how Sagarmala will help conserve marine and coastal areas or how interlinking of rivers which depletes wildlife habitats and groundwater is an ideal initiative for water management.

But, then, the implementation of SDGs like the 1992 sustainable development principles is perhaps leading us to yet another review in 2030 that will build on the past and look hopefully into the future. ■

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ASSAM'S GOLDEN VOICE

A film on the life of an unusual folk singer

Saibal Chatterjee
New Delhi

FOLK singer Pratima Barua Pandey (1934-2002), whose unconventional life choices, exceptional talent and mellifluous voice fuelled a career that helped expose the richly diverse musical traditions of Goalpara to a wider national audience, is the subject of a new critically acclaimed Assamese film, *Sonar Baran Pakhi* (The Golden Wing).

Guwahati-based filmmaker Bobby Sarma Baruah's second narrative feature uses the rare Rajbangshi language and original tracks in the voice of Pratima Barua to evoke the spirit and essence of the time and place in which the Calcutta-born recording artiste, a member of the royal family of Gauripur, discovered her calling.

Pratima Barua, nicknamed '*Hastir Kanya*' (Daughter of the Elephants) for her affinity with the mahouts of her native land, was a woman way ahead of her times. Encouraged by her father, Prakritish Chandra Barua (Indian cinema pioneer Pramathesh Barua's brother), she broke free from the confines of the palace, roamed free and befriended peasants, boatmen and cowherds. It was a rebellion that raised many eyebrows, upset her mother no end, but shaped her life and career.

Accompanying her father on royal hunts deep inside the forest around the royal abode, Pratima heard the songs of the mahouts and was enraptured by them. From these men she learnt a great deal and incorporated their sounds into the popular folk songs that she rendered over several decades for films, All India Radio (AIR) and other platforms. In the process, she lent a new dimension and reach to Goalpariya folk music.

Sonar Baran Pakhi opens with a scene in which Pratima Barua, as a child, is being told the folk tale of Hastir Kanya, about the neglected wife of a priest. The husband brings home a second wife, the brattish daughter of another priest. The distraught first wife weeps by the river. Her tears turn the water salty, which attracts a herd of elephants. The pachyderms hear the woman's tale of woe and, moved by her plight, decide to make her one of their own. They transform her into an elephant. So mesmerised is the young Pratima by the story that it leaves a lasting impression on her.

A still from Sonar Baran Pakhi

Pratima Barua broke free from the confines of the palace, roamed free and befriended peasants, boatmen, cowherds

Pratima Barua Pandey

All this and more form the narrative spine of *Sonar Baran Pakhi,* which premiered in October last year at the 18th MAMI Film Festival in Mumbai and then travelled to numerous other festivals in and outside the country, including the International Film Festival of South Asia, Toronto, and the Indian Film Festival of Los Angeles (IFFLA).

"It was my dream for a long time to bring Pratima Barua's life and music to the big screen," says Sarma Baruah, who made her directorial debut in 2014 with *Adomyo* (Irrepressible), a powerful tale of a young woman who loses her husband to AIDS and faces several challenges in raising her only daughter. *Adomyo* won an award at the Dhaka International Film Festival.

Bobby Sarma Baruah

In Sarma Baruah's new film, Pratima Barua is played by three actresses at different stages of the legendary singer's life — Susmita Ray, Pranami Borah and Arati Barua. The principal casting took the director a fair amount of time and deliberation. "I had to be absolutely sure that I got it right," she says. "I approached the enterprise with a sense of trepidation. After all, I was dealing with an enormously respected figure of Assamese culture. I couldn't afford to slip up."

This meant that Sarma Baruah, despite having worked with Pranami Borah in *Adomya* and knowing her capabilities as an actress, had to put the latter through an audition and costume test to ascertain her suitability for the part. It required her to play Pratima Barua from her late teens to her mid-40s. The ageing protagonist is played by Arati Barua, a veteran actress with a proven track record.

More than the faces that Sarma Baruah puts on

Continued on page 30

Pratima Barua was nicknamed Daughter of the Elephants for her affinity with mahouts

the screen, *Sonar Baran Pakhi* is defined by its evocative visual texture and soundscape. The director approaches the recreation of the life of Pratima Barua with respect and restraint.

Yet the film does not shy away from bringing out the human aspects of the late singer's personality. She smoked and drank. She continued to pursue her musical career even after marrying a college professor (Shankar Pandey) and becoming the mother of two daughters. And she held her own in an age when women were allowed little social leeway. *Sonar Baran Pakhi* presents a rounded portrait that is both revelatory and highly engaging.

Goalpariya folk music got a new dimension

It helps that the camera (cranked by Avijit Nandy) is an unobtrusive presence and the 86-minute film exudes an unhurried feel thanks to a preference for long, steady takes. "I needed that kind of rhythm and pace in order to capture the essence of the period and the pace of life in Pratima Barua's part of the world when she was at her peak," says Sarma Baruah, who is also a poet and short story writer and currently working on a PhD dissertation on the influence of folk culture on Assamese cinema.

"Rajbangshi is not my mother tongue but this film could not have been made in any other language for this is the language of Pratima Barua's music. I had to research for close to two years to grasp the finer nuances of her work," says Sarma Baruah.

To further strengthen the authenticity of the treatment, the director had to source decade-old songs from the AIR archives. "Procedures had to be followed. Initially, AIR could not find anything. I thought I had hit a deadend. So I turned to HMV for help. There, too, I made little headway. Luckily, I eventually got what I was looking for from AIR itself. Some of the tracks had seriously damaged portions," she says.

While, like *Adomyo, Sonar Baran Pakhi* is the tale of a remarkably talented and tenacious woman who dared to carve her own niche in a conservative social milieu, it occasionally goes beyond the life of Pratima Barua to shed light on other great personalities of the period, including Assam's tallest cultural figure, Bhupen Hazarika.

Hazarika was instrumental in spotting Pratima Barua's talent when he heard her at a *jalsa* held in the Gauripur palace in the mid-1950s. He roped her in to sing a Goalpariya folk song in his very first directorial venture, *Era Bator Sur* (1956). Pratima Barua's voice instantly made its way into the hearts of music fans and Goalpariya folk music, barely known outside a limited sphere until that point, took Assam by storm.

Hazarika is played by actor Nilim Chetia. Another real-life personality who is a fleeting part of the *Sonar Baran Pakhi* script is filmmaker Ritwik Ghatak, who, according to legend, had proposed marriage to Pratima Barua through her father.

Unfortunately, for filmmakers like Sarma Baruah, one of several women directors who have ventured into Assamese cinema of late, getting ahead in a world dominated by Bollywood is a tall order. "I am proud that so many Assamese women are helming interesting films, but as far as promotion and marketing of these films is concerned, we simply do not possess the wherewithal to break through the clutter," says the director. "Given the mass-oriented cinema culture that we live in, it is very difficult to take my kind of films out to the people."

Persistence is the name of the game. From Pratima Barua's times to Bobby Sarma Baruah's, the scenario hasn't changed all that much for women striving to make their mark in Assam's cultural domain. ■

TEA AND TREK AT MUNNAR

Susheela Nair
Munnar

WE received a green carpet welcome as we entered the tea town of Munnar. There were manicured tea bushes all around and the air was filled with the fragrance of tea. Situated at the confluence of three streams which congregate at the heart of the town in the High Ranges, Munnar (pronounced Moonaar) means three rivers in local parlance. Every nook and crany of Munnar is endowed with alluring natural beauty which can be explored at your own pace.

There are picnic spots at each bend of meandering roads and innumerable hiking trails to explore. You can frolic under roaring cascades of water or tee off in tea country. Exploring the town itself is a delight. Interestingly, perched on three hillocks, overlooking the centre of town, are three major religious places of worship — the Murugan Temple, Mount Carmel Church and Muslim Jamath, testifying to Munnar's tradition of communal harmony and peaceful coexistence.

Then there is India's first Tea Museum, located on a tea estate which is more than 100 years old. You can delve into the history of the tea tradition in the High Ranges here. At the entrance, a sundial catches the eye. The memorabilia preserved inside include photos, curios and other tea paraphernalia. There is also the EPABX of a 1909 telephone system as well as other items from the colonial era. A mini tea-manufacturing and tea-tasting unit offer glimpses of the different aspects of tea processing. You can see the original 1905 tea roller, the rotor vane, the Pelton wheel of the 1920s and a rail engine wheel of the Kundale Valley Railway.

SUSHEELA NAIR

The Tea Museum

There are several road trips one can make out of Munnar through some far-flung tea estates. The drive to the dams of Mattupetty, Kundale and to Top Station, perched precariously on a precipitous ridge in Tamil Nadu, is pretty interesting. This idyllic spot has stupendous views over the Tamil Nadu plains and the edge of the Western Ghats. En route, we screamed our lungs out at Echo Point and took a cruise in the picturesque backwaters of the Mattupetty Dam, flanked by steep hills and dense woods. We glimpsed wild elephants quenching their thirst on the far side. From Mattupetty, we drove four kilometres along Top Station Road to Sethuparvathipuram Dam (or Kundale Dam), located in Kundale.

SUSHEELA NAIR

Tea plantations in Munnar

SUSHEELA NAIR

The endangered Nilgiri Tahr in the Eravikulam National Park

The waterfalls and their enchanting environs leading to excellent picnic spots and trekking routes are at their glorious best immediately after the monsoon. The most popular trail is through a valley of rhododendrons and pine forests to Meesapulimala, the second highest point in the High Ranges. On the way to Thekkady, we stopped by Power House Waterfalls which cascade down a steep rock 2,000 metres above sea level. Athukal, located between Munnar and Pallivasal, is a feast for the eyes. Nyayamakad is a land of breathtaking waterfalls. The waters tumble down from a height of about 1,600 metres. The Vallara and Cheeyampara Falls, located close to the National Highway on the Adimali-Munnar route, are a sight to behold during the monsoon.

The highlight of our trip was a bone-rattling Jeep ride from Munnar to Kolukkumalai, located in the upper reaches of Tamil Nadu's Theni district close to the Kerala border, at an elevation of 7,900 feet above sea level. It is acclaimed as the world's highest tea plantation, growing 'the most flavoursome tea in the market'. Other bonuses include awesome views of the sweltering plains of Tamil Nadu.

There is a path that was once used by estate workers to ferry tea chests to the plains and provisions back to the top. We set out on a guided tour of the tea factory to understand the various aspects of orthodox tea processing and were treated to piping hot tea at the end of the factory visit. What gives Kolukkumalai tea a special flavour is presumably the high altitude at which it grows.

As we ascended the steep slopes of Eravikulam National Park, Anaimudi (8,841 feet), the highest peak in South India, loomed in the distance. The undulating rolling grasslands and wooded valleys of the Eravikulam National Park house one-third of the world's population of Nilgiri Tahr, a highly endangered animal which roams freely within touching distance. Once in 12 years, cascades of *neelakurinji* blossoms spill down the slopes. We followed in the footsteps of the nimble-footed wild goats and found them foraging for grass. The frisky young ones gambolled up and down the slopes.

A 20-km drive from Marayoor on the Rajamala-Udumalpet Road (SH-17) took us to the Chinnar Wildlife Sanctuary, a unique protected area in the Western Ghats due to its ecological, floral, geomorphological and cultural significance. The star attractions of Chinnar are the grizzly giant squirrel and the endangered star tortoise. There are dolmens in Chinnar also. We culminated our trip with a drive to Kanthaloor village, known for its luscious apples, sugarcane fields and terrace cultivation. ■

FACT FILE

How to get there

Air: Nearest airport is Nedumassery (Kochi) – 121 km (4 hours).

Rail: Nearest railhead is Aluva (120 km).

Road: Aluva is 120 km away, Palakkad is 150 km away.

When to go: September to May-end. If you want a monsoon break, June, July and August are ideal.

Tourist information office: District Tourism Promotion Council (www.munnartourism.com)

PICTURES BY SANDEEP PARANJAPE

The bedroom looks out into a vertical garden

The bedroom

Hi-tech vaastu home

Susheela Nair
Bengaluru

AS I stepped into Sankrithi, the dream home of Shivakumar, an entrepreneur in Bengaluru, I was struck by the feeling of space, light and positivity all around. Tucked away in the lanes of Basavangudi, a laidback suburb and an erstwhile vegetarian Brahmin stronghold, the house is a breath of fresh air in the cluster of nondescript structures surrounding it.

Young designer Sandeep Paranjape has meticulously planned the house down to the last detail. It flaunts decor which is a fusion of aesthetics and cutting-edge technology. Built on a sprawling 4,700 square feet, the independent house is a three-storied structure, created with style, minimalism and warmth thanks to Paranjape's inimitable style and choice of materials in tune with the family's preferences.

It is interesting to see the complete involvement, personal commitment and enthusiasm of Shivakumar and his wife, Geetha, in making their dream home a reality. Escorting us around the house, Shivakumar says, "The name of the house, Sankrithi, was suggested by my daughter, Niriksha. The house is the result of my wife's immense creative disposition, meticulous planning, styling, keen attention to detail and personal supervision." She kept giving feedback while the house was being constructed, explained Shivakumar. Niriksha is studying medicine but keeps herself updated on design trends and the creative facets of a good home. Her trendy room with brightly done interiors, colourful upholstery and bedspreads reflects her vibrant personality and cheerful nature.

Sankrithi is an inspiration for many with its firsts. It boasts of a temperature-controlled ripple smart pool, with an extensive open-to-air sit-out. It has a lawn on Level 3. The extensive teak wood used has been sourced from Shivakumar's ancestral home in Hole Narsipura in Hassan district of Karnataka and dates back to the 1930s.

The house also has a first of its kind 15.1 Atmos Digital Sound system installed in a gigantic 12-seater home theatre with a dance floor and laser lighting. The design consultant of renowned music director A.R. Rahman planned the home theatre room. The entertainment area on Level 3 also has a bar, gym, steam and Ayurvedic massage facility. The home theatre reflects Shivakumar's love of cinema.

The lobby and an aquarium

A beautiful collage of his favourite stars of yesteryear welcomes one to this room.

The foyer overlooks a unique water body with colourful kettles spouting water. The space has a soothing ambience. The living area on the ground floor has an attached private garden and a two-layered nature aquarium with live plants. The house is 100 percent *vaastu*-compliant, with elements such as the elevated entry point at the main entrance to the high roof in the living room, the location of the kitchen, the water body on the northern side of the living room, the *puja* room, the open-air rooftop sitting area, the direction of all the bedrooms, and so on. The colour scheme is cool and soothing. The furniture placement across rooms for greater utility is impeccable.

The entrance lobby is a blend of contemporary design with a touch of ethnicity. The lobby is about 20 feet high with handpicked chandeliers. A two-layered aquarium in the lobby has been specially designed to ensure an uninterrupted view from the dining area which is parallel to the lobby. The home has a spacious living area, family lounge and separate dining area that opens into an outdoor private terrace, *puja* room, master bedroom and a spacious kitchen. The marble used for flooring has been sourced from Silvassa in Gujarat. The master bedroom on the ground floor opens into a lawn with a water body and creates the perfect ambience for spending quality time with the family over coffee.

The home has LED smart lighting control systems. One can control the lighting through a laptop, a tablet and even a smartphone. The house has the latest security systems. The dining area has wooden-bladed fans sourced from the US.

The swanky home deserves greenie points for its extensive use of solar panels and a water treatment facility that ensures the water in each tap is RO-purified. Also, the house has excellent cross-ventilation that makes natural light available until dusk. To ensure huge power saving, Shivakumar took utmost care to have the entire house fitted with LED automated lighting control systems. ■

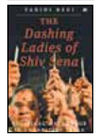
RANDOM SHELF HELP A quick selection from the many books that turn up for review

Female street politics

By Anita Anand

WHO would imagine that Bala, a leader of the Shiv Sena women's wing in Mumbai, would ride astride her motorcycle in her sari, fiercely? Tarini Bedi, author of *The Dashing Ladies of Shiv Sena*, as part of her doctoral research, also jumped on Bala's bike to get to know firsthand the world of Shiv Sena women.

Bala tells Bedi that on her bike, she is like Shivaji and the Rani of Jhansi on her horse. People can hear her coming and that is what makes her dashing! Bedi writes that this danger-inflected persona of 'riding' is entirely exceptional for women and what the Shiv Sena women call "dashing".



The Dashing Ladies of Shiv Sena Political Matronage in Urbanising India; Tarini Bedi Aleph Book Company ₹699

It's a world where women emerge from their homes and families for the common good of community politics. They bring to it their female experience — and some machismo — to bond over community rights and wrongs. They work and play together, in a sisterhood of changemakers. At the lowest rung of the political party, it is these women who are the movers and shakers of the Shiv Sena.

Dashing Ladies is an ethnography of the everyday lives of women like Bala who have learned to navigate the political space that is occupied predominantly by men. Bedi points out that while the book focuses on women political animators, it also addresses broader scholarship on women's participation in cultural-nationalist politics in India. It builds on the already extensive scholarship on Hindu nationalist women, which has been vital in probing the political presence of women who enter the public sphere through routes that are at odds with liberal feminism.

Bedi conducted her research over an extended period in the cities of Mumbai, Pune and Nashik. Starting in 2003, she travelled to these cities with the cooperation of the party women and got to know their workings at close level. The book has numerous narratives of how the Sena women organise and resolve community disputes and restore order. Adopting female and male tactics, they have built for themselves and their party a broad-based cadre of women workers and leaders.

The book takes us through the rituals and psychologies of the Shiv Sena women — why they do what they do and how this has enabled them to get where they have. Over decades, women have watched and slowly consolidated their power — by watching men and how they function. Therefore, it is of little surprise that the 'matronage' practised by the women is not that different from the 'patronage' of the men in their parties, or society in general.

The various descriptions of how Bala and other women leaders conduct their business is rather revealing. Whether it is to garner votes in an upcoming election, or respond to the community needs of water taps, toilets, schools, health centres or a road — it's done with the calculated mind and muscle of the men in local politics. They cajole, threaten and bully their party workers and community members. Surrounding themselves with sycophants, they consolidate their power and position. This would stand to reason as there are no other real role models in politics for women. And, as mostly working class women, they are attached to their families and communities — and to their men — in a visceral way.

Bedi argues that the 'matronage' of Shiv Sena women is different from 'patronage' of men. She defines matronage as "those strategies of political effectiveness and political connection produced among those who in all conventional understandings of patronage and clientelism, are the most unlikely of patrons. It is often produced among those who are economically, socially and spatially marginalised in the cities they live in, and structurally marginalised in their political party. But, these patrons are, nevertheless, often central to the grids of electoral politics that emerge in spaces of precarity and uncertainty in particular locations."

In this she could be right. However, given the reality of national or local politics, it is questionable whether the strategies of the 'matronage' of Sena women are that different to the 'patronage' of men. And, if they are, how then would these enable the women to move ahead (and indeed up) into party echelons?

But, that aside, the book is an impressive work by the author, who has lived in Maharashtra and now is in the US. It makes an important contribution to the burgeoning body of literature on women in politics in India, especially since the 1992 Constitutional amendment and quota for women in municipal and grassroots politics. As an extension of a doctoral dissertation, it is heavy on theory (old and new) and language.

The book is useful for those who want to understand the women's cadre of the Shiv Sena, local Maharashtrian politics, and the evolving phenomena of women in local politics in India. While there isn't anything new or revealing about the situation of women in Indian politics, the book is a window into the intimate lives of the dashing women of the Shiv Sena. ■

Story of a Dalit woman

By Anjana Basu

KAUTIK on Embers is about life in a village in Umravati district of Vidarbha, infamous for farmer suicides. The novel became a classic when Uddhav J. Shelke first penned it as *Dhag* in 1964. The story seems timeless. In fact, leafing through the book one hardly misses the lack of references to telephones and electricity that are now found in the remotest of villages. Shanta Gokhale's seamless translation opens up its reach to a wider audience.

Kautik is a woman walking on hot coals. Her husband, Madhav, suddenly appears disinclined to earn an income and her son, Bhima, seems to follow in his father's footsteps. Kautik has married into a family of tailors, a low caste, though not the lowest of the low. Madhav's impulses make it more and more difficult for her to buy a few vegetables to go with the *bhakri* she feeds her children. Though they move to her father-in-law's home from their village, Telegaon, things do not improve. Madhav decides to give up tailoring for daily labour, weeding fields and picking grain, but finds his caste pride getting in the way of menial work.

Kautik on Embers Uddhav J. Shelke Translated by Shanta Gokhale Speaking Tiger ₹399

The pregnant Kautik decides that two pairs of hands are better than one and begins to work, only to discover that she is the one determined to keep the family going, sometimes to the extent of feeding her newborn daughter, Yasodi, opium to keep her asleep so she can work in the fields. For her, caste doesn't matter — it is an issue of survival. She is friends with Muslims, drinks water in their homes and is willing to support her younger son, Nama, who is good at studies despite the odds.

In villages across the country, women remain the breadwinners, saddled with dysfunctional husbands. Most of them struggle to hold their homes together with grit and determination in the face of overwhelming odds. *Kautik on Embers* is filled with the daily jostling and discrimination that village life entails, especially for those at the bottom of the pyramid. For watchers of soaps and serials, there are the expected jealousies and kindnesses, a miserly father-in-law, a schoolteacher with a heart of gold.

Shelke's style is terse and Gokhale has managed to retain it as sentence follows sentence in rapid-fire sequence. Presumably, the terseness was used to bring out Kautik's uneasy fight against life and her family. Though Gokhale is worried about how Kautik might sound in English and raises the usual issues of how life does not translate into another language, the basic message of the novel comes across. After all, hard times and scraping together a living are common across cultures — with or without caste issues to complicate matters.

What stands out is Kautik's determination to fight on, a kind of Scarlett O'Hara 'tomorrow is another day' stance which she passes on to Nama. The gloom is never too overwhelming even though it threatens to be.

Ultimately, novels like these are a call to action but determining what that action should be is difficult, given the state of rural India and its varied issues. ■

AYURVEDA ADVISORY
Dr SRIKANTH

Soothing painful joints

My 56-year-old mother has been complaining of pain in her knees for the past three months. She finds it difficult to get up from her chair or to go for her usual evening walk. So she stays indoors most of the time and moves around restrictedly. She has been taking calcium tablets and medicine has been prescribed but it is not helping much. Please advise.

Shubhra Ganguly

WHY KNEES HURT: Complaints of knee pain after 50 would usually be osteoarthritis — a common form of arthritis which afflicts millions of people throughout the world. Osteoarthritis occurs when the protective cartilage on the ends of our bones wears down over a period of time, that is, the condition results from the breakdown of joint cartilage and the underlying bone.

The most common symptoms of osteoarthritis are joint pain and stiffness. Joint swelling and decreased range of movement may also be present in many cases. The symptoms worsen with time. Staying active, maintaining a healthy weight and regular treatment may help in slowing the progression of osteoarthritis and, in turn, alleviate pain and improve joint functions.

WHAT YOU CAN DO: Some of the risk factors for osteoarthritis like heredity, age and gender make it difficult to prevent its onset. However, some lifestyle modifications may help in halting its progression:
Exercise will help patients of osteoarthritis to improve their condition and move better. Walking, jogging, aerobics, cycling and swimming are the best. Also, do exercises that strengthen the quadriceps. Perfect your posture — maintain the two natural curves of your spine, whether sitting or standing. Yoga, when practised regularly, reduces pain associated with osteoarthritis.

Being overweight can increase the stress on weight-bearing joints such as knees and hips. Even a little weight loss can relieve pressure and reduce pain. Repetitive motions should be avoided as far as possible. Diabetic patients must control high blood sugar as it may be a risk factor for osteoarthritis.

DIET: Eat foods rich in calcium and Vitamin D — milk, fish, eggs and cereals. Ginger reduces joint inflammation. Asafoetida, onions and garlic are helpful.
SUPPLEMENTS: Herbal supplements like Shallaki, Shigru and Hadjod (available as tablets from Himalaya) are very effective in relieving joint and muscle pain and support normal joint function. Ashvagandha, Shatavari and Haridra are other herbs that can be taken long-term. They strengthen the joints.
THERAPY: Heat applications are useful for joint stiffness. Also, cold applications help patients with muscle spasms and pain. Knee braces can be helpful in knee osteoarthritis.
THERAPEUTIC OIL MASSAGE: Any of the following oils may be used for gentle massage for 20-30 minutes on the afflicted joint/s followed by fomentation, twice daily.

The oils are Dhanvantaram taila, Pinda taila, Mahanarayana taila, Sahacharadi taila, Murivenna or Kottamchukkadi taila (manufactured by Arya Vaidya Sala, Kottakkal or Nagarjuna) or Pain-relief oil (Himalaya Wellness).

Non-sticky liniments like Rumalaya liniment (Himalaya) and Myostaal liniment (Solumiks) can be used in place of oils which feel sticky.

MEDICATION: A combination of any of the following medicines, depending on the actual condition of the patient, will be helpful:
Maharasnadi Kashaya/Rasnasaptakam kashaya /Dhanvantaram Kashaya/ Dashamoola Kashaya (Arya Vaidya Sala, Kottakkal or Vaidyaratnam Oushadhasala, Trichur) — 10 ml taken with 30 ml boiled and cooled water twice daily, before meals.
Yogaraja guggulu/Lakshadi guggulu (Arya Vaidya Sala, Kottakkal) or Rumalaya forte tablets (Himalaya) or Rheumartho gold plus (Baidyanath) — two tablets three times daily, after meals.

In specific cases of fatigue and weakness, Ashvagandharishta and Balarishta — 10 ml each with 20 ml of water, twice daily, after meals.

For severe stiffness and joint pain, Guggulu tiktaka ghrita /Amritaprasha ghrita / Indukanta ghrita (Arya Vaidya Sala, Kottakkal) — 5 ml on an empty stomach followed by half a cup of hot water, twice daily for three-four months will gradually provide relief. ■

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

PRODUCTS

Desi chocolate

BITE into a treasure trove of chocolates produced by Campco (Central Arecanut and Cocoa Marketing and Processing Cooperative), which runs the only chocolate factory in India that buys its cocoa beans directly from 15,000 farmers in Andhra Pradesh, Karnataka and Kerala.

Campco makes 14 types of chocolates in its state-of-the-art factory in Puttur in Karnataka. There is white chocolate, milk chocolate, dark chocolate, chocolate with a biscuit layer, éclairs and drinking chocolate. You can also buy large bars of chocolate for melting into desserts. Prices are very reasonable.

Campco's recent innovation is Kalpa, a dark chocolate made with palm sugar. Kalpa is rich in potassium, magnesium, iron and Vitamin E, B and C. Chocolate fused with palm sugar yields an intense chocolaty taste that's pleasantly addictive.

Campco was set up in July 1973 by Varanashi Subraya Bhat after the prices of arecanut crashed between 1970 and 1973 and farmers found themselves in deep distress. Bhat came to their rescue. He mobilised farmers and set up Campco.

In the 1980s arecanut farmers were again in a spot. They grew cocoa as an inter crop but during the peak buying season the multinational company that always bought their beans backed out because of a slump in international prices. Campco stepped in and bought the cocoa beans and subsequently set up the chocolate factory.

AJIT KRISHNA

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RNI No.: DELENG/2003/11607 Postal Registration No.: DL(S)-01/3255/2015-17.
Registered to Post without Pre-payment U(SE)-10/2015-17 at Lodi Road HPO New Delhi-110003.
Dates of Posting: 3 & 4 of April. Date of Publishing: 1st of every month. Total no of pages: 36.

TATA STEEL

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SHAPING THE FUTURE

Education - the key to a sustainable future

Education has always been the thrust area for Tata Steel. In 2014, Tata Steel ensured the following in Jharkhand:
Scholarships to more than 3,000 SC/ST students | More than 16,000 adults became functionally literate | 200 underprivileged girls linked to formal schools | More than 10,000 students provided pre-matric coaching | Mid-day meals for 50,000 students in partnership with Jharkhand government and ISKCON.

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Tata Steel Rural Development Society (TSRDS) runs camp schools at Pipla and Noamundi in partnership with Jharkhand Education Project

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