

Grassroots

A JOURNAL OF THE PRESS INSTITUTE OF INDIA PROMOTING REPORTAGE ON THE HUMAN CONDITION

Errant husbands find going tough as women wield the stick bravely

Asia's largest slum Dharavi in Mumbai has an app, The Little Sister, to stand up against domestic violence. The women can report instances and get help. Far away in Assam, women suffering from domestic violence have no such app. But they have learned to come together and help each other — in quite a different way

RAKHEE ROY TALUKDAR, Chirang District, Assam

The women of Assam's Ahipowali hamlet in Deosiri, Chirang District, which has a population of about 100 households, have taken up cudgels against domestic violence themselves. Instead of cowering down and suffering, the women together beat up the erring husband and warn him against repeating the act. Taking such a strong stance has worked in the area; drunken husbands now think twice before beating up their wives or daughters.

Ravaged by floods and ethnic violence, families in the border hamlet, situated near Bhutan, have had to stay in relief camps off and on. When the situation normalises, they start rebuilding their houses but the fear of displacement persists. The men are mostly unemployed; a few work on farms or as day labourers in Bhutan. Despite this, they do not shy away from hitting their working wives.

Although the society in India's Northeast is considered matrilineal, studies have indicated that the status of girls in Assam is no different from girls in other parts of India. Assam has been ranked second by the National Crime Records Bureau (NCRB) in terms of rate of violent crimes in the country in 2016.

According to the bureau's latest report, Crime in India 2016, the rate of violent crime was 74.22 in the state last year,



Women and girls sing a song of empowerment as they gather for their weekly meet. The young woman (on right, closest to camera), runs a tent business and is an activist who motivates women not to cow down before abusive husbands.

the second highest in the country with New Delhi (77.5) occupying the top position.

Based on the crime rate, Assam was ranked second in crime against women, only behind New Delhi. "Altogether 20869 cases of crime against women were registered in the state last year," the report said. They include 157 dowry deaths, 5339 kidnappings, 1779 rapes, 370 attempts to commit rape and 3378 assaults with intent to outrage a woman's modesty.

In Ahipowali hamlet, wife-beating had become so ingrained in the system that women took it as a way of life. But with NGOs creating awareness about domestic violence, women realised the need to say no and stand up against it.

Laxmi Cheri, a volunteer with The Ant (The Action Northeast Trust), an NGO working to make women aware about their rights, says: "It was as if domestic violence had a kind of cultural sanction here. Everyone thought that man has all rights over a woman's body, regardless of her feelings. Women too kept quiet about the violence at home, thinking it has to be tolerated as men are the major bread earners of the family."

Menuka, 20, one of the few who has studied till Class XII, says: "There have been instances where the women have had to be hospitalised due to severe beating. Bones are broken and physical torture is common. It was then that the women, who were part of the self-help groups (SHGs), decided to take a stand. The first step is to counsel the husband. If that fails and we realise the husband is too much to handle, then we take the last resort of beating up the husband together."

Says Rambha, 21, a village entrepreneur, who runs a tent business, and is one of the leaders of the group: "First we try to counsel the husband that such extreme physical violence is abusive and against the law. And that their children

are getting traumatised by the violence at home. We even take the case before the village council but when the man refuses to heed our advice, we collectively reach the house and beat him up. And this has worked in most cases."

Rambha adds, "After the thrashing, the men usually sober down as they realise that women of the village have turned against him and he better mend his ways. But if the men are found to be unrepentant and they continue their tirade, the women then ask the village council to impose a penalty or isolate the family socially."

"Women have understood that collectively they can handle men even if they lack family support. During the SHG meetings, the women meet and bond over their sorrows and joys. The most important lesson is that they have all learnt to speak up and not just be mute listeners anymore," Laxmi points out.

Women activists working here say that even though the exercise happens on a small scale (population here being less), this is women empowerment at its best. "Although our awareness campaigns do not preach about beating up men, it is a decision the women have taken themselves that this is one of the most effective ways to tackle errant men. The main objective is to drill some sense into men and not show their power in any way. The one good thing is women here have realised the significance of collective power says Laxmi."

"We are now aware that we derive strength from each other and that collectively we can even make mountains move, says Menuka. "But we must bind our voices together to send out one loud and clear message against systematic abuse and assault. It is time that nobody takes us for granted anymore."

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Photos: RR



Women and girls of Ahipowali hamlet in Deosiri, Chirang gather for a meet. The girl on extreme right next to the two children is Menuka, who has been to school and is vocal against domestic violence.

FOCUS

Hardy indigenous rice varieties score, help farmers battle the odds

In India, the goddess of wealth is called Annapurna or Lakshmi. She is also the deity for food and is symbolised by a sheaf of paddy illustrating how important *anna* (rice or food) is to Indians. Scientists have shown that paddy, a grass variety, originated in India before spreading to different parts of Asia. Indians are the highest consumers of rice, next to China. Yet, the question of sustainability of production is raising its head regarding the centuries-old crop. Climate change, vulnerability of hybrid varieties to cope with it and the question of food security are intertwined with the issue

RANJITA BISWAS, Kolkata

According to the International Rice Research Institute (IRRI), India has the world's largest area under rice cultivation and is one of the largest producers of white rice, accounting for 20 per cent of global rice production. A growing fraternity of agriculturists and bio-scientists now make a case for bringing back indigenous varieties of rice which they claim withstand climate changes better than hybrid varieties introduced during the Green Revolution (1960-70) in India.

Says Debal Deb, plant scientist, who has devoted more than three decades to nurture a seed bank of rice, "In India, until 1970 about 110000 rice varieties existed, of which no more than 7000 survive today on farmers' fields." In his seed bank, Basudha (earth) located in Odisha, there are 1300 varieties of rice seeds. Of them, 370 indigenous varieties are from his home state, West Bengal (where he had originally started out with the seed bank, Vrihi), of which 200 are still in use by farmers.

So, why the emphasis on reviving indigenous rice though more high yielding hybrid varieties are still favoured by majority of Indian farmers? "Despite research in rice genetics in the past 70 years we have not been able to develop a single, modern high yield variety of rice that can either withstand drought or survive in water deeper than two metres or high salinity of soil," Deb says. As an example, he illustrates that in the Basudha collection there are 12 varieties of indigenous rice which can withstand drought and do not need a single drop of water for irrigation after transplanting.

Also in Deb's collection are 18 varieties that can withstand three metres or deeper water for three months and are suitable for deepwater farms.



Rustic charm — the Basudha Centre in Odisha.

"A Bengal landrace (a traditional variety of paddy developed over time) like *Lakshmidighal* can grow in four metres deep water. The farmer would harvest the rice on board a canoe," he says.

Natural disasters that create havoc for man and livestock can also wipe out agricultural stocks that are artificially developed, which take for granted certain conditions in soil and weather conditions. The devastating Aila Cyclone that flattened the Sundarban Delta Region in the Bay of Bengal in May 2009 also flooded it with saline water, making it unsuitable for hybrid rice cultivation. Deb distributed four varieties of salt-tolerant landraces in a few islands so that the farmers could sustain themselves. "There are 16 varieties of rice which can grow and yield sufficient grains in the coastal saline lands, where sea water incursion is common," he reiterates.

Kolkata-based autonomous research organisation Centre for Environment and Development (CED) Director Ashish K. Ghosh is of a similar view: "If there is loss of production due to changing rainfall pattern or more frequent cyclones we observe today, thanks to climate change, how will the farmers cope? Hybrids are unable to cope with these changes." He also worked extensively in the Sundarbans post-Aila, encouraging farmers to sow saline-resistant rice to avoid shortage of food.

Ghosh is skeptical about the benefits of the Green Revolution in the long run. "During that

period hybrid rice and wheat were perhaps seen as necessary to tide over the situation. The US even sent food to India under the PL480 Scheme (Food for Peace). But on hindsight, we find hybrid rice needs more water, more pesticides which ultimately affects the quality of the soil. Traditional rice varieties do not require costly inputs of fertilisers or pesticides and produce better quality straw for cattle feed and roofing of houses," he says.

High doses of pesticide use has had another side effect. Though it would seem incongruous, visitors from urban areas to rural Bengal often come across farmers trying to encourage artificial pollination by making flowers touch each other – "like kissing", as one visitor observed. The reason: natural pollination by birds and bees is not happening; they have disappeared due to unbridled pesticide use by farmers aiming at higher productivity.

Dwipen Baruah, a progressive farmer in Assam, has recovered strains of about 60 indigenous rice varieties, like *Thupibora*, *Pakhibora* (sticky rice variety), *Aborsali* (named after the Abor tribe), *Amanabao* (red rice), etc and has cultivated them on his land and has also sold the seeds to those interested. "These are our traditional rice varieties but had almost disappeared from the daily menu. With hybrids, there's no surety. In Assam, we have floods almost every year. I also use traditional pesticides like leaves of the Mahaneem tree,



Debal Deb (down in the paddy field) explaining benefits of the indigenous food system to local villagers.

which I have seen elders doing. The soil quality remains good with natural fertilisers too."

A plus point attributed to hybrid rice is its higher nutrition value compared to traditional varieties. According to the National Family Health Survey-4 (NFHS-4), 53 per cent of all women (including 50 per cent of pregnant women) in India are anaemic. UNICEF says that 43 per cent of Indian children under five years are underweight.

Deb begs to differ. "In a recent GM iron-fortified rice variety, IR681444-2B2-2-3, the iron content, especially relevant in a country like India with a high incidence of endemic anemia, is 8.9 mg per kg, but we have shown that at least 68 folk rice varieties contain two to 20 times higher iron content in the grains."

The other aspect, Deb points out, is that with farmers moving to mono-culture of hybrid rice, other crops which they traditionally grew, have taken a backseat and they spend money on buying them (as food items). "India was self-sufficient in pulses earlier, an essential item to go with rice, but now the country has to import it; it has become very expensive and unaffordable by many."

Deb refers to a report by the International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD) which says that reliance on resource-extractive industrial agriculture

is risky and unsustainable, particularly in the face of worsening climate, energy and water crises. It also notes that expensive, quick fixes – including GM crops – fail to address the complex challenges that farmers face, and often exacerbate already bad conditions.

Yet, the need for higher yield to feed an increasing population (India is projected to overtake China by 2022 according to a new UN report) cannot negate the efficacy of hybrid rice. As Maria Helena Semedo, deputy director-general, FAO (Food and Agriculture Organisation), points out, rice is critical to global food security. Over three billion people across the globe eat rice every day. Taking cognizance, FAO and IRRI have recently agreed to work more closely to support sustainable rice production in developing countries aiming at improving food security and livelihoods while safeguarding natural resources.

IAASTD (2010) also highlights the need to build more resilience into food systems by increasing investments in agro-ecological sciences, small-scale biodiverse farming methods and farmer-led participatory breeding programs. "By combining science with traditional knowledge, farmers will be able to continue to produce food for themselves and their communities," Ghosh believes. ■

A campaign for organic farming gains ground, urges a return to 'our roots'

BHARAT DOGRA, Bhubaneswar

“We have been already growing a wide diversity of vegetables in the kitchen garden but when we heard about an organic and safe food campaign we felt this will help us to progress further and so have decided to link up with it.” This is how Parvati Barik explains the new link with organic food and farming campaign in Bhubaneswar.

I could deeply appreciate the diversity of the kitchen gardens here as I had just been served lunch based largely on the produce of these gardens. While the rice came from the farms of the peri-urban (land between town and country) village called Kala Rahungya on the outskirts of Bhubaneswar, most of the other food came from kitchen gardens.

On a huge banana leaf I was served a generous offering of rice plus Dalma (Arhar pulse cooked with potato, raw papaya, brinjal, parwal, onion and tomato, a traditional Odisha dish), chutney of coriander leaves, mixed vegetables of drumsticks and potato, sweet and sour tomato chutney, bitter gourd chips cooked with sesame seeds, dry *baari* made from powered black gram, leafy vegetables cooked with grated

coconut, another leafy vegetable made from leaf of bottle gourd, cucumber and coriander salad with lemon. Generous extra offerings of various items were provided before I could ask for it.

Saudamini, who helped cook the delicious food said, “We believe in organic farming as our body behaves as we eat. If we produce and eat healthy food, then only we will remain healthy.” The assembled women said that many problems were being caused by the recent increase in the use of chemical fertilisers and pesticides, and now the time had come to intervene with special steps to check this and return to “our roots of organic farming”.

Several of the women were earlier organised in a self-help group. Now they have formed a women’s committee for *nirapad* (safe food). Apart from promoting organic farming in their village, they will be participating in food festivals based on recipes of organic food, particularly those based on millets. They also intend to spread a strong message against alcoholism.

The campaign of organic farming and healthy foods to which these women are linking up has been organised by a

leading voluntary organisation of Odisha named Living Farms. The organisation works at one level with tribal farmers in Rayagada District to protect and promote their traditional farming systems based on organic farming. At another level, the organisation works in cities like Bhubaneswar to link city people with organic farmers so that a mutually supportive relationship can be established between the two sides, avoiding middleman. Women’s groups such as Shreya Women Association and Trishakti Mahila Parishad have joined the effort.

In addition to contacting women like Parvati and Saudamini, Living Farms has also got in touch with youths to try and mobilise their energy for street campaigns. Parvati is an M Phil student, so apart from mobilising women in her village she also campaigns among college students.

The campaign for organic farming in Bhubaneswar has also reached several schools – to organise visits of students to fields of organic farmers and help them to grow nutrition gardens in schools. Efforts to supply organic produce to school canteens are being made.

A group of senior citizens has been contacted to obtain their



Photos: BD

Tribal farmers are encouraged to adopt traditional farming methods.



A meeting of members of the Shreya Women Association.

help in spreading the message of organic farming in villages.

Says Jagatbandhu Mahapatra, project coordinator, Living Farms, “We want to initiate a many-sided effort to spread the message of organic food and farming at various levels

by involving women, youths and elder citizens with the aim of making Bhubaneswar a city which is very receptive to organic food as well as protecting the interests of small farmers, particularly tribal farmers.” ■

Specialty rice varieties of Kerala, a storehouse of nutrition

Rice is a staple food for millions of Indians. It can also be a vital source of nutrition and health-benefiting substances if some of the nutritious varieties of rice traditionally grown can be popularised and polishing is kept to a minimum, a new study of diverse rice varieties cultivated in Kerala has concluded

MONIKA KUNDU SRIVASTAVA, New Delhi

Kerala is home to a number of specialty rice varieties such as Pokkali, a saltwater-tolerant organic rice having medicinal properties and special taste, Jeerakasala and Gandhakasala (scented rice varieties), and Black Njavara and Golden Njavara (medicinal rice varieties extensively used in the Ayurveda). Researchers at the Rice Research Station, Kerala Agricultural University, Kochi, compared the varieties with two widely cultivated rice varieties, Jyothi and Uma, for nutrition value and acceptability by people.

The rice samples were compared for grain size and shape (which determines consumer preference

and commercial success), carbohydrate content (which affects overall pastiness after cooking and eating), gelatinisation temperature (affects cooking temperature of rice), content of protein (required for growth and development), fibre (reduces risk of bowel disorders and fights constipation), minerals (required for various body functions) and moisture (affects rice quality especially shelf life).

It was found that that Pokkali rice has all the desired qualities including nutritional values. It was rated among the best in terms of fibre and protein content, antioxidants with benefits of Vitamin E and minerals such as iron, boron

and sulphur. It had the lowest carbohydrate content (along with Gandhakasala) making it most suitable for persons with diabetes or those advised low-sugar diet.

Researchers point out that rice milling, done for polishing rice grain, involves discarding bran or the brown outer layer of rice kernel which has considerable nutritional value and health benefits. Processed rice is deficient in many minerals such as potassium (maintains blood pressure), phosphorus (for strong bones and dental health), manganese (required for various chemical processes in the body) and sulphur (main constituents of proteins in our body). “Polishing should be kept to a minimum during

milling, and the antioxidant-rich bran of these specialty rice varieties resulting from milling can be utilised in preparation of healthy snacks such as biscuits, baby foods and breads,” pointed out K.S. Shylaraj, who led the study, while speaking to India Science Wire. The study results have been published in the journal, *Current Science*.

Rice bran, besides having high fibre content, consists of various antioxidants with similar benefits as Vitamin E. It helps lower cholesterol levels and also protects and fights infections. Rice bran oil extracted from varieties of rice considered in the study were found to be a good substitute for groundnut oil in supplying fatty acids besides being more



Photo: ISW

(L-r) Rice varieties Jyothi, Jaya, Uma, Pokkali in the first row, and Jeerakasala, Gandhakasala, Golden Njavara, Black Njavara in the second.

economical. “Growing Pokkali rice is being popularised as a solution for farmers in coastal areas who are facing a problem of high levels of salt content in soil due to rising sea levels. Pokkali rice, if grown during the monsoons, holds rainwater. This freshwater then seeps into the ground and removes some of the salt water thereby reducing the saltiness of soil,” said Shylaraj. ■

(Courtesy: India Science Wire. The research team included Soumya G. Nadh and Shimi K. Chandran.)

Migrants miss kinship, community, find no salve for the psyche

Rich or poor, life is more than earning and eating and sleeping; rich or poor, humans need recreation for the soul. The rich cater to this need by buying diversion (going to the movies, hiring DVDs, taking vacations, having parties, celebrating birthdays, calling up friends). The poor can't. They have neither the time nor the resources. This is another seldom addressed socio-cultural dimension of keeping body and soul together in a 'developing' economy. Radha in this story reflects the uncertainties of life, the helplessness and the longings for home of millions of migrants across India

SAKUNTALA NARASIMHAN, Bengaluru

In the eight weeks that Radha has been working as a construction labourer in Bengaluru, she has not spoken a single word to anyone. She and her husband migrated from a tribal village in interior Andhra Pradesh in search of work, but he is deaf and dumb from birth. The language Radha speaks is a mixture of tribal dialect and rustic Telugu, and hardly anyone in Bengaluru understands the dialect.

The middleman who brought the couple from their village to the metropolis made a deal with the site contractor, and Radha and her husband get paid for the work they do – which is mostly fetching water and hauling sand bags for mixing cement mortar, passing bricks up to the mason, sweeping the site at the end of the day, all conveyed to her by the supervising *mestri* through gestures.

The work keeps the childless couple fed – but now Radha is getting restive. Back in the village she could talk to her neighbours and friends, walk on Tuesdays to the Hanuman Temple on the outskirts of the *thanda* (hamlet), visit the weekly *haat* (farmers' market) with neighbours, not just to buy stuff but also for human interactions and news updates, and divert herself with plucking wild tamarind from the nearby woods.

But now, Radha cooks, feeds her husband, washes the clothes, reports for nine hours of work, cleans up, returns to her makeshift tin-roof hut and cooks the night meal. She misses human interactions. Her husband doesn't, he is used to being in a silent world of his own.

"I want to go to my *thanda*, for a week," Radha told the supervisor, using gestures, sign language and some broken Kannada syllables. He understood, but chided her. No, he said, she cannot go. The pillars will be poured this week, she cannot miss work. She also knows that not only will she lose wages for the time she plans to be away, it will also cost money to make the trip – an overnight journey by bus. Radha cannot

afford that. But, but.... she broke down crying uncontrollably, which is when I came upon her.

Suspecting that she was ill or worse, I found someone who could communicate, tracing an interpreter using the scrap of paper she had, with the address of her village. When I fetched him to talk to her, it turned out he too was working on a site nearby, he spoke her dialect, she was aware of this but as a 'decent married woman' couldn't approach him, a stranger, and a male living alone.

Radha just wanted to interact with her own people, have some human communication, cook the special dishes of their community like the *thanda* women used to, in a group, while exchanging gossip and banter. According to her (as I found out later), these were as important to human life as earning and eating.

We discuss the problems of migrants, but mostly in terms of alienation and rootlessness, but Radha's problem alerted me to the deeper cultural dimensions of loss of kinship and community. I asked around, found other migrants willing to comment on this. It was a revelation. We look at daily routines in terms of earnings (much needed, of course) but what about the non-quantifiable dimensions of 'salve for the psyche' and refreshment for the mind, which is what humanises people? Alienation in terms of language is itself a barrier, but if it results in loss of social contact, how do we measure or quantify the deprivation, much less compensate for it?

Some of the migrants I spoke to reminisced about what they missed – the women in particular. A male can go to an arrack shop, spend time watching others, stroll around, sit on a park bench to watch the world go by. A woman can't. "You are right," interceded her co-worker, a migrant from Bihar. "Going to the *gudi* (temple) used to be a nice group routine for us women in the *gaon* (village)," said the first woman who was from Odisha.



Migrant workers at a construction site.

Photo: SN

"On festive days like Nagapanchami, we gathered, sang and danced our traditional *kummi*," recalled another migrant, "here, no one knows all that, no one even celebrates Nagapanchami here, and I can't dance by myself..."

Academics speak about loss of language leading to loss of heritage, no less. Here are migrants losing not only parts of their traditional dialects but also lifestyles, recreations and community interactions – these are the elements that humanise our lives, not cash on hand or bank balances.

"I used to enjoy drawing *muggu* (*rangoli*) in front of my entrance, in the *thanda*, sometimes very elaborate ones on festival days, that neighbours came to admire," says another. "Here, there is no space outside our small room, to draw *muggu*... our dwellings are huddled so close together."

Adds Radha, "I don't have children of my own, but in the *thanda* neighbours' kids would come, sometimes their mothers would leave them with me if they had to go somewhere. Here, we are aliens, there is no interaction, we are all from different places and different castes, we have little in common unlike back home."

'Home' is not the city, even if they earn their living here. They are like the Asian immigrants who go abroad in search of jobs and feel lonely, unless they can find compatriots (and quickly form an 'Indian Association' to celebrate Diwali or occasional get-togethers with *pakodas* and *samosas*).

If the educated diaspora can crave community interactions, despite having TV, newspapers and magazines, mobile phones and Skype, how much more cultural 'homesickness' the internally displaced migrants much face when transported from a rural *thanda* to a metropolis! Bengaluru, the 'IT capital of India', has migrants from Bihar, Odisha, Assam, Tripura, Uttar Pradesh, AP and Rajasthan.

Which reminds me – one of the migrants I spoke to was a Rajasthani who sits by the roadside near a popular shopping complex, selling embroidered mobile pouches and bead bracelets that she creates on the pavement, with an infant at her breast. She makes money "which I didn't have enough of, back home," she says, "but this city is soulless, people bargain and buy and hurry past, no one stops to chat or even ask why my baby is crying. In any case, I don't speak their language, they don't speak mine, is this life? *Kya karoon, maaji, pet ka sawaal hai* (what can I do, it is a matter of filling the belly). I miss my village, I wish I could go back...."



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Why does segregating garbage still remain such an uphill task?

Come November each year, along with swollen waterways and flooded streets, another prominent image that flashes repeatedly on television screens is that of mountains of mixed garbage. Chennai's solid waste headache is by no means entirely monsoon-related. But the issue manages to capture the media's attention around that time of the year mostly because unregulated dumping tends to disrupt waterways in many parts. Inefficient solid waste management results in waste piles that contribute to urban flooding. While most citizens blame civic authorities for the lapse, are they doing their bit?

SEETHA GOPALAKRISHNAN, Chennai

Chennai has two dumping grounds spread across 400-plus acres in Kodungaiyur and Perungudi, both of which have been in existence for more than 25 years. The dump yards handle anywhere between 2100 and 2400 metric tonnes of garbage on a daily basis. According to the Corporation of Greater Chennai's solid waste management (SWM) department, nearly 4500 metric tonnes of garbage is collected from across the city daily. Perfectly compostable food and green waste constitute nearly 40 per cent of this.

The City Corporation picked October 2 last year to make source segregation of garbage mandatory in accordance with the Union Ministry of Environment, Forests and Climate Change's revised solid waste management rules, 2016. The new rules mandate the segregation of garbage into biodegradable waste, dry waste and domestic hazardous waste (which includes diapers, sanitary napkins etc) before handing it over to conservancy workers. Resident welfare associations and gated communities are expected to ensure that all waste generated within the complex is segregated and also treat biodegradable waste within the premise as far as possible. While the move is certainly a welcome one, the civic body still has no plan in place to make sure citizens adhere to it.

The seasonal exchange of inland and seawater dates back to over 2000 years in Pallikaranai. The marshland served as the

receptacle for the overflow from 36 water bodies around it. This has been severely compromised due to mindless fragmentation of the massive wetland. The 220-acre Perungudi landfill which currently receives garbage originating in South Chennai sits right on the Pallikaranai marshland. Mountains of mixed waste choke the crucial wetland ecosystem today.

"We're living at a time when wetlands are viewed as wastelands. Why else would the administration construct a landfill on such a biodiverse wetland? Poor understanding of the city's drainage pattern is the root of all evil," laments Jayshree Vencatesan from Care Earth Trust, a Chennai-based NGO working on biodiversity conservation. Along with high-rises constructed all over the reclaimed marshland, the dump yard severely restricts the flow of flood waters, resulting in severe water-logging for days on end around Pallikaranai.

Dump yards functioning over and beyond their capacity have been Chennai's reality for years now. Segregating waste at source, composting wet waste and recycling non-biodegradables can unburden these mammoth yards. But is Chennai prepared? Given that nearly 68 per cent of all the waste generated in Chennai is from residences alone, citizens' role in tackling this menace cannot be ignored. Overall, conceptual awareness does not seem to be so much of an issue as clarity on how to go about segregating household waste. People still

remember the Corporation's exercise of distributing two coloured bins to encourage households to segregate waste a few years ago.

Kanchana, a resident of the southern suburb of Keelkatalai is well aware of the concept but admits that she hands out household waste in plastic bags every morning. When asked why the plastic bag, she says, "How else? Also, I was under the impression that Corporation workers do the segregation before they send them to landfills." Her belief, one that is shared by many, is not completely untrue. Conservancy workers sort through the garbage before compactor lorries pick them up from their respective wards. But when mixed waste is secured tightly in polythene bags and dumped, their job becomes all the more difficult.

Kumar, a conservancy worker employed by the corporation on a contract basis seconds this. "We have been instructed to separate waste into biodegradable and non-biodegradable and do that to the best of our ability. We make sure to place milk covers, paper and cardboard boxes in separate bins. But when they come mixed with wet waste from the kitchen, it all turns messy and we have a tough time sorting everything."

V. Parisutham from Hand in Hand India concurs. "If milk covers and plastic bottles are kept separately from wet waste, workers can segregate them. Imagine a plastic bag filled with wet kitchen waste, the odd milk cover and a sanitary pad, do you think it is possible for the



Overflowing garbage — an image from the 2015 Chennai floods.

worker to rummage through it and segregate?"

Hand in Hand India introduced the concept of waste segregation and door to door garbage collection in village panchayats including Mudichur almost eight years ago. But segregation didn't catch on immediately. "Behaviour change does not happen overnight. We had to engage with the community constantly, talk to them on a regular basis about the need to segregate and put in place a foolproof system to make sure it was followed," says Parisutham.

In neighbouring Perungalathur, a town panchayat, a user fee is collected from residents for managing solid waste. Being classified as a village panchayat, there is no spending provision in existence to meet recurring monthly expenses to manage Mudichur's solid waste. "This was a major challenge for us. But we managed to overcome that by organising locals in the form of self-help groups (SHG) and user contribution was collected from residents through them. Despite that, there is a shortfall; Hand in Hand pitches in to meet it," Parisutham adds.

SHG members were trained in segregation and waste management. Christened Green Friends, they were tasked with collecting garbage from doorsteps on a daily basis. The collected waste would then be taken to a resource recovery park where they would sort through the garbage. The biodegradable waste would

be separated from the non-biodegradable ones; workers are allowed to sell recyclables and the money raised is usually split between themselves as an incentive. Thanks to local level empowerment and initial handholding, this model has been functioning successfully till date since its inception in 2007.

It would be untrue to say that Chennaites do not segregate at all. There are the occasionally concerned citizens and interested resident welfare associations who ensure segregation is done to whatever extent possible. Lakshmi Priya and Sundar, homeowners in upscale Neelankarai, do so. "We make sure to keep plastics bottles, sachets and milk covers separately and hand them over to the conservancy worker every three to four days. The resident welfare association in our area also distributed two coloured bins to encourage segregation. Vegetable and fruit peels get dumped in the shallow pit we've dug for composting in the garden. The amount of wet waste that leaves the house is very minimal," mentions Lakshmi Priya. ■

(Courtesy: India Water Portal)

CORRECTION

In the March 2018 issue of *Grassroots*, the story, 'Let us respect Nature and not destroy our beaches, please', was wrongly credited to Jagannath Chatterjee. The author is Seetha Gopalakrishnan. We are sorry.



The Perungudi dump yard chokes the Pallikaranai marshland — one of the worst things we can do to the environment.

Small step for a company, a big leap indeed for children

Ashok Leyland's Road to School programme, designed as part of its CSR initiative, makes schooling a reality for underprivileged children in remote villages of Tamil Nadu. The programme is expected to cost about Rs 18 crore, which is a small amount for the Rs 20000-crore company. Yet, this makes a big difference to the under-privileged children who would otherwise find themselves ill-equipped in an unequal world

RAGHUVIR SRINIVASAN, Chennai

“Good morning, Sir! How're you, Sir?” The group of little kids break into a sing-song chorus as you enter the classroom of the panchayat union middle school. Pleasantly embarrassed, you blurt out a response and throw the question back at them. The reply is quick: “We're fine, Sir; thank you, Sir!”

Nothing extraordinary in this except that this is a school deep inside what used to be forest brigand Veerappan's territory and these are under-privileged children who, until recently, did not have the benefit of even basic education thanks to their remote location. We're in a small hamlet Dhoddur, on top of a hill, 75 km from Hosur, Tamil Nadu. Forget conversing in English, most of these little kids with bright eyes and innocent smiles could not spell words even when in the 5th standard nor could they do basic arithmetic.

With classes from 1st-8th Standard, the school boasts of 210 students on its rolls but more than half of them were attending school for namesake. Until recently, the school had only the principal who doubled up as teacher for all classes. Today, there are two vacancies filled but it is anyone's guess how long the new appointees would stay.

It is an old problem alright, and one not unique to the Dhoddur School — remote village schools where teachers

refuse to join work is a problem plaguing government schools. The price is paid by generations of children. Given the state's policy of not detaining children until the 8th Standard, the children are promoted to higher classes each academic year but without them possessing the required levels of learning or knowledge. So, how do you break the cycle?

Enter Ashok Leyland (ALL) in 2015 with its Road to School programme. As part of its corporate social responsibility initiative, ALL decided to take up the task of improving learning levels in 153 government schools in and around Hosur, Namakkal and even in suburban Chennai. The idea, as N.V. Balachandar, President-HR, Communication and CSR, says, was to work with the principals of these schools to screen the children and identify those lagging behind either due to inadequate teacher attention or due to learning disabilities and conduct remedial classes during school hours right within the school premises.

“Our CSR activities were ad hoc in education, health, environment and driver safety but when the statutory 2 per cent of average net profits on CSR spend kicked in we re-evaluated our choices and decided to focus on improving learning levels in the lower classes,” says Balachandar.

The company commissioned Boston Consulting Group to research the subject. The next

step was to identify a partner who would implement Leyland's strategy in the identified schools. NGOs were the obvious choice and Delhi-based Learning Links Foundation (LLF) was chosen through a competitive bid that was evaluated by a committee

LLF would employ resource persons (teachers, in another name) from the same area who would teach the children picked up for remedial learning in the three subjects of English, Tamil and Mathematics. These special classes would be held for an hour or two after which the kids would return to their regular classes. The idea was to bestow special attention on the children and employ modern teaching methods to bring them on a par with their classmates.

LLF is reimbursed all costs, including the salary of the resource persons (about ₹15000-20000 per month), teaching materials, etc and a service fee, which Balachandar refused to disclose citing confidentiality. The entire operation is overseen by a dedicated team of nine officers. Technology, including WhatsApp, is being leveraged to control the massive operation across 153 schools.

“Though we had the easy option of handing over the responsibility completely to LLF along with the required funds, we decided to keep the control with us and only outsource the job to them,” says Balachandar, adding that EduSports has also been employed for sports related development in the schools.

The effects are beginning to show in the schools adopted in the first phase of the programme in 2015, one of which is the Dhoddur Middle School. Screening tests show that the children's learning levels are improving. Reports of tests seen by *Business Line* and visits to three different schools in Anjetty near Hosur prove that children are beginning to benefit from the programme. They proudly show off their awards and prizes secured in inter-school competitions.

School Management Committees formed by ALL with



Children on their way to school in Dhoddur.



Students and teacher intently watch an instructor demonstrate fluid dance steps.

representatives of parents and teachers apart from its own executives oversee the progress of the initiative in each school. It is also the committee's job to ensure that parents send their little ones to school daily without fail.

Given the extreme poverty levels here, parents are often wont to send their kids to graze goats in the hills as it will help them earn extra money. LLF resource persons say that they often personally visit the village homes to question parents who do not send their children to school.

Madhaiyan, the parent representative of the school committee in A. Pudhur Village near Anjetty says that he pulled his son out of the local “convent” (private school) and put him in the government primary school after seeing the quality of education imparted there. “I was coughing up big money in the private school for none too good education. Here my son gets better education and for free!” says Madhaiyan. It helped that one of the resource persons in the school, Rajgiri, is an ex-student of the same school. Young Rajgiri radiates enthusiasm as he mingles with the kids and teaches them.

As an added incentive to the parents and children, Leyland has recently started providing breakfast to the kids comprising of bread, bun and cookies. According to N. Seenivasan, senior manager-CSR at ALL's Hosur plant, the dropout rates have almost come down to nil after this initiative. The children are provided lunch under the government's mid-

day meal scheme. Interestingly, though it has not been able to ensure that the teachers it appoints stay in their posts, the government machinery seems to be working even in these remote parts. Children do get free uniforms, books, note books and even school bags from the government.

Going the extra yard, ALL takes the children on field trips too. Last year, selected children were taken to ISRO, Sriharikota, the Bangalore zoo and so on. As part of practical learning, they visited the nearby police station, post office and hospital. That these visits have had an impact on the children is evident when you converse with them.

Oviya and Malarvizhiselvi, middle-school students at the A. Pudhur School, want to become doctors while Ranjitha shyly says she wants to go “foreign”. You ask her where, and she chimes up in all innocence: “Chennai!” Seenivasan says that the children barely knew the world beyond the village that they lived in which is why the field trips were organised to widen their knowledge.

The first test for Road to School will come when ALL exits the schools chosen in the first phase on completion of the remedial programme. “We're working with the government and trying to fill up teacher vacancies. We'll ensure that the positions are filled when we move out. The response from the government is positive,” says Balachandar.

(Courtesy: The Hindu BusinessLine)



Play activities usually never fail to hold the attention of children, and they are completely absorbed here.

A battle with breast cancer — yet another challenge

Tough times are not new to the women of Kashmir – most have spent a lifetime coping with either violence or an oppressive patriarchal social order. But breast cancer is fast catching up with the feisty women who are simply ill prepared to overcome the hurdle. Awareness levels are low, and social attitudes are conservative. Inhibition and hesitation to go to a doctor usually means that women seek a diagnosis when it's already too late. Things, however, are expected to change as information spreads and more and more women become alert

BASEERA RAFIQI, Srinagar

Shafeeqa, 37, from Adipora Sopore, in north Kashmir, lies in the cancer ward of Shri Maharaja Hari Singh (SMHS) Hospital in Srinagar, reduced to a mere skeleton with stricken eyes and parched lips. Her face is covered with a printed off-white scarf that matches her sallow skin. A government school teacher and mother of three boys under 15 years, she was diagnosed with breast cancer in August 2016 and things have never been the same since.

"I was experiencing discomfort in my right breast for nearly three months. I consulted several local doctors but no one was able to give a conclusive diagnosis. Then, on the advice of one physician, I got a mammogram done it and, much to my horror, it came positive," recalls Shafeeqa, her voice frail and broken. She has no strength left in her after three rigorous rounds of painful chemotherapy.

Things are not looking too good for her and, meanwhile, her husband, Riyaz Ahmad, also a school teacher, has his own struggles to contend with, as he comes to terms with his wife's illness, keeps things going on the home front and takes care of his sons. "When the news broke I didn't know how to deal with the situation. Either I had to take my wife to Delhi and let my children suffer or double my efforts to keep both the things going. So, I decided to admit my wife in the city and shift my children here too. This way, I am able to go the office, hospital and school," he says. Incidentally, breast cancer is not an uncommon affliction on her side of the family. Earlier in 2016, Shafeeqa's cousin had also been diagnosed with breast cancer and is undergoing treatment in Delhi; her mother, too, had succumbed some years back to the disease. After an urgent surgery in August, Shafeeqa was showing signs of improvement, but in November she was told to start on chemotherapy.

Unfortunately, cancer seems



Photo: Sana Altaf/WFS

Cancer numbers are fast rising in the Valley, and like elsewhere in the country breast cancer afflicts women the most (picture is for representational purposes only).

to be another challenge that is fast catching up with women in strife-torn Kashmir. A rapidly changing lifestyle, eating habits as well as perennial stress and anxiety are to blame for the rising number of cases being reported each day at the tertiary hospitals in the city. For now, the Sher-e-Kashmir Institute of Medical Sciences (SKIMS) and SMHS are the top facilities in the Valley and oncologists here have made it mandatory for every cancer patient to be registered before starting treatment.

At SKIMS, Dr Maqbool Lone, head of the department of oncology, has instructed patients to get registered "so that we can build a definitive record of cancer patients in the state". He informs, "Presently, the global average of cancer patients is 300 per lakh population; in India it is 100, and in Jammu and Kashmir it is 70 to 80 per lakh population. This includes all types of cancers."

According to him, although "women are vulnerable to several cancers, breast cancer is at number one spot, as more and more patients are being admitted here on monthly basis". Ask Dr Lone to pick the key reasons for this swift rise in numbers and he lists, "Late marriage and childbirth, poor breast feeding and obesity are significant causes that increase the risk of this type

of cancer considerably. As this type of cancer is directly related to hormones women of a certain age become more vulnerable. Only ten per cent of breast cancer cases can be attributed to family history so it's chiefly related to lifestyle issues that can be avoided."

Along with shock and trauma of the disease comes the anxiety of paying for treatment, which many cannot afford. Various non-government organisations (NGOs) are coming forward to help out poor patients by footing the bill for medicines, doctors' fees and surgery. "We see more than 50 patients a day and most of them are women with either breast or ovarian cancer," states Dr Nuzhat, who works on voluntary basis with a local NGO exclusively for cancer patients on the outskirts of the city.

Afroza Sheikh, 56, from Beerwah, was diagnosed with breast cancer a year ago. Hailing from a farming family that anyway finds it difficult to make ends meet, setting aside money for her treatment was indeed a tall order. Fortunately, they were able to speak to a few NGOs for seeking financial assistance, one of which came forward to bear the medical expenses. "It was a nightmare to see the reports. For people like us who are as it is surviving on the edge, such a disease only spells death;

if not the actual disease then the exorbitant expenditure of hospitalisation and medicines is killing," she remarks.

Precaution and prevention seem to be the only plausible ways to lower the risk. "Early detection is very crucial in these kinds of cases and if the patient comes to us during the first stage, we are able to cure her; in the later stages, survival rate is low. I recommend breast cancer screening after 30; a yearly screening is important as is self examination," says Dr Lone.

"I remember once a patient of nearly 72 came to me when she was doing really badly. She didn't tell her son or daughter about it and by the time she reached us the only thing we could do was to remove her breast and check how far the infection had spread. We couldn't do much for her, as it was the last stage of the cancer. That is why I say that the lack of awareness is as dangerous as the disease," he elaborates.

On his part the good doctor has been aggressively pushing for regular awareness drives. "We have been conducting awareness campaigns throughout the Valley – in schools, colleges and universities to educate young girls to identify the signs and learn how to do self examination of their breasts," he says. ■

(Courtesy: Women's Feature Service)

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A rare love for green and a life dedicated to conserving plants

A retired plantation officer in the Social Forestry Department in Nashik, Maharashtra, has made it her mission to inspire people to save and plant trees, and live as close to nature as possible. For several years now, Kusum Dahivalkar has been visiting inaccessible forest areas, meeting up with teachers from agricultural colleges and plant scientists, and interacting with tribal people who live as one with nature

SUREKHA KADAPA-BOSE, Mumbai

The clearest way into the Universe is through a forest wilderness – John Muir, naturalist and environmental philosopher, who was an advocate of preservation of wilderness in America way back in the 19th century.

The 60-plus Kusum Dahivalkar lives up to Muir's philosophy each and every day. In fact, her life has been all about the forest, the flora and fauna. Her love for the green comes through as one sees her interacting with her two-year-old granddaughter, Yashshree, who is playing with shrubs in her home nursery. As the toddler inadvertently tugs at the leaves of a creeper, Dahivalkar says, "Tell her [leaf], 'Bala [child] don't cry, I didn't pull you. I just caressed you. I love you a lot.'" Of course, the little one, who hasn't even started speaking coherently yet, emulates her granny's voice and kisses the leaf.

As she indulgently looks on at the child moving around the green patch trying to get a feel of the plants and the soil, Dahivalkar ponders, "Yashshree is lucky she has plants to see, touch and feel. I wonder what will happen to her grandchildren. Will they get to see verdant flora and fauna only in pictures?"

Sitting at her beautiful home in Nashik's Pathardi neighbourhood she laughingly admits that during her stint with the Social Forestry Department she took full advantage of the indifference of her colleagues and attended every workshop, lecture series and conference she possibly could across the country to acquire knowledge about plants and their healing

properties. "Everyone thought I was insane to dedicate all my time to researching about plants," she remarks. But that was her true passion and she had no qualms in pursuing it single-mindedly.

She developed an abiding interest in the plant world in childhood; she hails from a family of ayurveda pundits from Nizar Village on the border of Gujarat and Maharashtra, and began learning about plants, roots and flowers from her grandfather and father at an age when girls are generally more interested in playing with dolls. Taking up a career closely connected with this line was only natural.

So committed is Kusum-tai, as she is fondly called, to building awareness around conservation of plants that following her superannuation she pooled in funds from gratuity, provident fund and other savings to invest in half-an-acre of land on the outskirts of Nashik. Today, she runs the Hirvepunya Institute on the property, which has her two-floor apartment and a cozy conference room with a seating capacity of about 50 plus people where Kusum-tai conducts her workshops. In the open space around the house she has created an extensive nursery which has over 2000 varieties of saplings of medicinal plants and herbs collected from different parts of the country.

"My colleagues, friends and relatives tried to dissuade me from buying land to set up a nursery. However, this had been my dream and I had always wanted to impart my knowledge to as many people as I could so that somehow we all could all do our bit to save the planet," shares

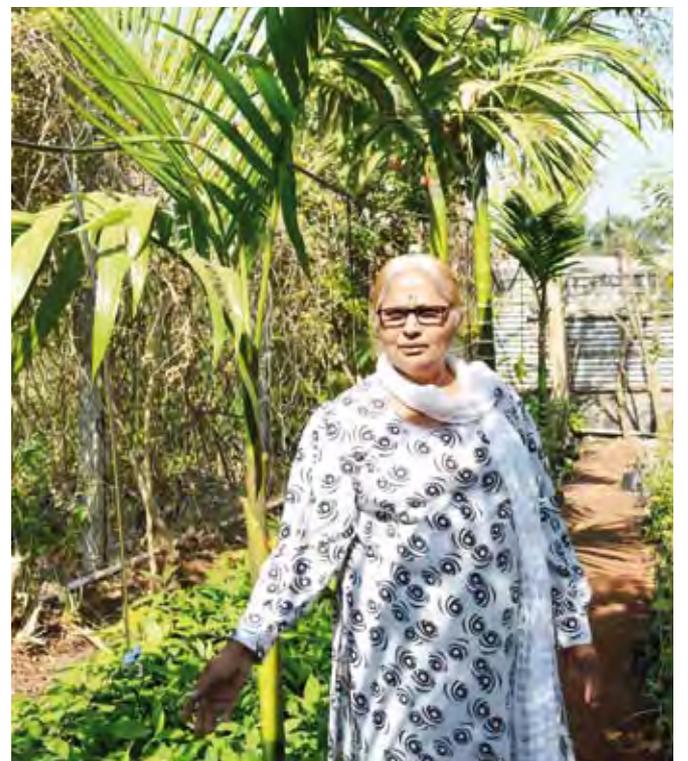
Kusum-tai. Incidentally, she has been a single parent to her nephew, Chirantan Parekh, who lost his parents when he was a toddler. She runs the institute along with him nowadays.

In the beginning, Chirantan, an Electronics and Telecommunication engineer, too, was skeptical about Kusum-tai's decision; however, when he saw the kind of love and respect she commanded in her professional group and the kind of response she received from those who attended her workshops he came on board. In fact, since then he has become a full-time advocate of cultivating plants and foods the organic way.

Indeed, Kusum-tai's workshops are quite popular with people signing up well in advance to secure their place. "It's her passion which is very contagious. If you spend a day with her, you will automatically start looking at trees with a different perspective and instinctively start caring for them," remarks Milind Babar, a Nashik-based lawyer, who has been a beneficiary of a workshop.

Dr Ujwala Kapse, an ayurveda doctor practicing in the city, adds, "During the course of my education, I have learnt about the medicinal plants. But what makes Kusum-tai's three-day workshops unique is the fact that she painstakingly explains the inimitable healing qualities of over 100-plus plants available in her own nursery." Her workshops also include a do-it-yourself guide on identifying and propagating plants.

"We learn to grow plants in pots either through seeds or cuttings. Currently, I grow my own *adulsa* (*Justicia adhatoda*) to treat cold and cough; *Costus igneus* or the insulin plant, to treat diabetes; *Peltophorum* that helps keep BP in control; *Aloe vera* and, of course, varieties of *tulsi*, and so on, in my own verandah. This has reduced our dependency on over-the-counter allopathic medicines and increased our sensitivity to plant life. A win-win really," elaborates Rekha Choksi, a homemaker, who like Dr Kapse and Babar has her own farm



Photos: SKB/WFS

Kusum Dahivalkar in her nursery which has more than 2000 varieties of saplings of medicinal plants and herbs.

where they all put into practice the knowledge they have gained from Kusum-tai's workshops.

Talking about their work, Chirantan, who has gained enough knowledge about the plants to ably assist his *aayee* (mother) says, "A full-time course is for three days. For those who can't sit through the entire duration we conduct classes for an hour or two for 15 days. The cost per workshop is a modest Rs 3500."

Like most environmentalists, Kusum-tai is concerned with the indiscriminate felling of trees in the name of development and replacing them with exotic species like the *gulmohur*, *subabul* or eucalyptus, which are "hardly beneficial to the ecosystem although they grow fast". "The indigenous plants last for decades; at times, even centuries. Their seeds need a minimum of six to 18 months to germinate and then take years to stand tall and mature, in the process building an ecosystem suitable for birds, animals and insects," she points out.

Kusum-tai bemoans the quick-fix culture prevalent in the forest department officials

these days. "Unfortunately, every forest officer knows about this, but they have to bow down to the pressure of the authorities who demand the fast growing plants which end up doing more damage than good," she says, visibly agitated.

When she takes up landscaping gigs or starts working on creating a garden for corporate office or for any locality she makes sure that she has a mix of sustainable plants and decorative flowering plants or she makes different sections like a herbal garden, kitchen garden, rose garden, orchid garden, spice garden, etc., so that visitors get to see all kinds of plants in a single allotment. And she fervently hopes that authorities and the *aam janta* (ordinary people) "wake up to the danger our planet is facing from our deep neglect of our indigenous flora and fauna".

She signs off rather poignantly, with a quote from Mahatma Gandhi: "What we are doing to the forests of the world is but a mirror reflection of what we are doing to ourselves and to one another." ■

(Courtesy: Women's Feature Service)



Dahivalkar now runs the nursery with the help of her nephew, Chirantan (above).