

TATA TRUSTS

SEPTEMBER 2019

# HORIZONS



## NUTRITION NOW

'The India Nutrition Initiative' is extending stellar support to nourish a national cause

### HEADS UP

Udaan takes flight to bring dignity to the care of the mentally ill

### NET GAINS

Rural women get familiar with the web and its wonders

### PERSPECTIVE

Kartick Satyanarayan on why our wildlife deserves better





# EDITORIAL

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Providing adequate and nourishing food to all Indians, particularly the country's children, is more than a need — it is a necessity and it is immediate. The *Horizons* cover story on nutrition highlights how this is happening, the different means through which the effort is being executed and the partnerships that are making it possible. The Tata Trusts have pitched in with support and The India Nutrition Initiative, or TINI, is a reflection of their commitment to what is surely a national and noble cause.

On the TINI menu are a variety of large endeavours: enhancing child-care centres in different parts of India, placing *preraks* (motivators) with district administrations to help implement government projects in nutrition, the fortification of staple foods, and more. Add it all up and TINI's impressive contribution to the National Nutrition Mission becomes clear.

Nutrition for the mind is the quest in Udaan, the subject of this edition's special report. A one-of-its-kind project to address shortfalls in the treatment of India's mentally disabled, Udaan swears by a 'reform and transform' approach to enable an overhauling of institutional care in the country. Dignity for the mentally ill is at the centre of everything done by Udaan, which is also in the process of creating a collaborative, community-based blueprint of care and treatment with its 'district mental health programme'.

A diverse mix of social development stories populates our features section: rural women being taught about the internet in record numbers; 'friends' delivering job opportunities to young people with limited employability quotients; a programme to lift the gloom enveloping agriculture and those dependent on it; a plan and a process to create model villages; an attempt to make the public healthcare setup accessible and effective; the rehabilitation of runaway or missing children; and a remarkable crack at minimising the incidence of, and deaths caused by, malaria.

Also in *Horizons* this time are interviews with Shawn Baker of the Bill and Melinda Gates Foundation and with Vijayalakshmi Ravindranath, outstanding neuroscientist and founder director of the Centre for Brain Research at the Indian Institute of Science in Bengaluru. In perspective, Kartick Satyanarayan, the chief executive of conservation nonprofit Wildlife SOS, pleads the case to protect the wild animals of India.

Cheers and happy reading.

*Christabelle Naranta*

*We hope you will help us make Horizons better with your valuable feedback. Please do write to us at [horizons@tatatrusters.org](mailto:horizons@tatatrusters.org).*

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#### EDITOR

Christabelle Noronha  
Email: [cnoronha@tatatrusters.org](mailto:cnoronha@tatatrusters.org)

#### EDITORIAL TEAM

Philip Chacko  
Gayatri Kamath  
Shubha Madhukar

#### EDITORIAL COORDINATORS

Kainaz Mistry  
Sonia Divyang

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### DESIGN

Shilpa Naresh  
Abraham K John

### CONTACT

Tata Trusts  
World Trade Centre 1  
26th Floor, Cuffe Parade  
Mumbai 400 005  
India

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**Cover image:** A mother and her child in their home in a village near Bikaner in Rajasthan; photograph by Iulian Ursachi / iStock (Getty Images)

# NEWS

## Agricultural innovation on the agenda



**T**he Tata Trusts are set to partner the Bill & Melinda Gates Foundation to establish the India Agritech Incubation Network (IAIN) and launch the 'Social Alpha quest for agritech innovations'.

IAIN is envisioned as a network of incubators across the country to promote innovations that can benefit farmers with small land holdings. The first hub for the network will be at the Indian Insti-

tute of Technology, Kanpur.

Also collaborating in the venture are Social Alpha (a technology incubator supported by the Trusts), Collectives for Integrated Livelihood Initiatives (an associate organisation of the Trusts), and the Uttar Pradesh government.

The Social Alpha quest for agritech innovations is aimed at enabling an ecosystem for innovators and entrepreneurs to develop

farmer-focused technology solutions. The goal is to help small and marginal farmers increase productivity and profitability.

As part of IAIN, a physical incubator will be set up at IIT Kanpur to provide laboratory infrastructure, venture-building resources, financial support and access to farmers. This will provide technology and business backing to 60 enterprises over five years. ■



## Help in Hyderabad for silvers

**T**he Vijayavahini Charitable Foundation (VCF), an associate organisation of the Tata Trusts, has joined hands with the Telangana government to create a first-of-its-kind connect centre for senior citizens in Hyderabad.

The 'elder spring response system', operational since April 2019, provides information, guidance, and emotional support to senior citizens. It is accessible through a toll-free number (14567) and it has, thus far, responded to

more than 1,000 seniors.

The system is being implemented by VCF and it has on its side different arms of the state government: the police, the health department, the district administration, legal services experts and civil society organisations.

Advice, solutions and more are offered once a call has been registered on the response system, which is operational every day of the week between 9:30am and 5:30pm. ■

## Partnerships get resources and a boost

The Tata Trusts have forged two new partnerships in the social development sphere, with IndusInd Bank and with the National Stock Exchange Foundation (NSEF).

The joining of hands with IndusInd Bank will lead to support being lent to a spring water conservation and management project in South Odisha and a girls hockey excellence initiative, also in Odisha.

The collaboration with NSEF, which will run over a three-year period, will provide financial backing for water and sanitation projects in schools and elderly care and education, both in the Nandurbar district of Maharashtra. ■



Odisha Chief Minister Naveen Patnaik with guests at the centre's inauguration

## Hockey centre in Bhubaneswar

The newest arm of the Naval Tata Hockey Academy, this one in Bhubaneswar, was inaugurated on August 13 by Odisha Chief Minister Naveen Patnaik.

Established as a high-performance training centre to groom hockey talent, the academy is a collaborative venture involving the Tata Trusts, the Odisha government and Tata Steel.

The Academy will absorb players emerging from the state's

three regional development centres (RDCs) for hockey, which are proposed to be set up in the sports hostels in Bhubaneswar, Sundargarh and Rourkela. The RDCs, for their part, will scout for talent from 10-12 upcoming grassroots centres.

The three components of the pipeline are under the Tata Odisha Hockey Programme, a joint initiative of Tata Steel, the Tata Trusts and the Odisha government. ■

## Development bond to promote a capital idea

Collectives for Integrated Livelihoods Initiatives (CInI), an associate entity of the Tata Trusts, will be the implementation partner in a \$15-million development impact bond being launched by Mumbai-based wealth advisory firm Waterfield Advisors.

The bond – called Lakhpati Kisan – will provide capital to a Tata Trusts initiative of the same name being implemented by CInI since 2015. The initiative aims to transform the livelihoods of 6,500



A 'lakhpati kisan' in Gujarat

small and marginal farmers in Jharkhand, Gujarat and Odisha.

The Lakhpati Kisan bond will fund interventions in the areas of capacity building, land and water management, high-value agriculture development, yield enhancement and the creation of additional livelihood opportunities.

CInI has, down the years, enabled the well-being of more than 25,000 families and nurtured 250 tribal entrepreneurs through its multi-pronged efforts. ■



# From **food** to **life**

The India Nutrition Initiative has gone the distance to help ease the malnutrition burden weighing down the country. **By Philip Chacko**

**T**he hideous statistics on undernutrition in India hide an uplifting story — for the first time in the history of the country since independence, nutrition has found the place it deserves in the national consciousness. The elephant has opened its eyes.

Age-old conversations about babies with swollen bellies and a populace dragged into the malnutrition mire by poverty and illiteracy have made way for action on the ground, solutions that yield positive results and political commitment to the cause of a healthier India.

Nutrition has raced up the social development agenda, and not a moment too soon. The launching of the National Nutrition Mission

(or Poshan Abhiyan) in March 2018 was the spur. Political will supplies the impetus essential to translate plans into productive projects, and partnerships between the government and civil society are helping turn the tide in the war against malnutrition.

## Capital concern

The India Nutrition Initiative (TINI), the flagship programme of the Tata Trusts, has played a full part in this war, contributing with resources, personnel and ideas. Nutrition has been a capital concern for the Trusts since 2015 but they needed a sharper focus to translate concepts and strategies into successes that can be replicated. TINI provides the means and the muscle to do that.

The Trusts had a role in getting the Nutrition Mission up and running. The effort began in earnest through a collaboration in 2017 with the World Bank and the Bill and Melinda Gates Foundation to create a mechanism that would enable improved implementation of the government's Integrated Child Development Services Systems Strengthening and Nutrition Improvement Programme (ISSNIP).

The ISSNIP initiative would go on to form the basis of the National Nutrition Mission, an operation that has galvanised every entity involved in upping India's nutrition quotient. TINI, for its part, has given the Mission its all through a diverse range of programmes designed to deliver

## NUTRITION EMERGENCY



**195 million**  
Indians are  
undernourished



**46.6 million**  
Indian children  
under 5 are  
stunted (low  
height for age)

**25.5 million**  
Indian children  
under 5 are wasted  
(low weight for age)



India ranks **103<sup>rd</sup>**  
among **119**  
countries in the  
Global Hunger  
Index

Sources: Global Nutrition Report, 2018; Global Hunger Index (GHI)





A child has her meal at an *anganwadi* in Bandipalem village in Andhra Pradesh's Krishna district



**“It’s easy to tackle issues where the cost-effect relationship is linear and straight. It’s different with nutrition, where a multitude of factors come into play.”**

— Dr Rajan Sankar, director, nutrition initiative

answers, resolve the complex and inform future endeavours.

Three of the programmes in TINI’s nutrition roster stand out. The appropriately named ‘making it happen’ helps deepen the impact of the Integrated Child Development Services Scheme, primarily through the 1.3 million-strong network of government childcare centres in the country. In food fortification, TINI works with the Food Safety and Standards Authority of India (FSSAI) to increase the nutritional value of five staples. And there’s the Swasth Bharat Prerak initiative that has placed ‘motivators’ in 360 districts of India to aid the Nutrition Mission with implementation,

coordination and monitoring.

There is nothing sophisticated or complicated about the various methods being employed — and that is a strength. There are adjuncts as well in the support system TINI has shaped to back the Nutrition Mission: data analytics to measure impact; establishing resource centres within the Ministry of Women and Child Development and FSSAI; and setting up the Tata Centre for Public Health and Nutrition at the National Institute of Nutrition.

There is plenty of heavy lifting for TINI to do, and it comes with the territory. “It’s easy to tackle issues where the cost-effect relationship is linear and straight,” explains Rajan Sankar, the

programme director for nutrition at the Trusts. “It’s different with nutrition, where a multitude of factors come into play.”

One of TINI’s objectives is to craft a template for nutrition. “You can choose a module that suits a situation and get ahead with implementation,” says Dr Sankar. “Resources have to be pooled and efforts layered one over the other to achieve maximum impact. Everything has to meld for India to enhance its nutrition goals.”

### **‘Not completely true’**

There is no shortage of optimism or enthusiasm in Dr Sankar and his team, a blend of subject experts and social development professionals. “We keep hearing that India has not done well in eliminating malnutrition; that is not completely true,” says Dr Sankar. “We could have done much better, for sure, but progress has been made in every state. There are a number of countries — Brazil, Peru and, in our neighbourhood, Thailand — that have reduced malnutrition far more rapidly than India, but then this country is unique: so huge, so much diversity, so many people.”

The enormity of the malnutrition emergency is what makes it imperative that all of India come together to fight the blight. The Trusts have not held back and that is perhaps why the Indian government has invited the institution to be its principal partner in the Nutrition Mission. “We are seen as enablers rather than donors,” adds Dr Sankar, “and that’s what is needed.” ■



Women being counselled at an *anganwadi* in Bandipalem in Andhra Pradesh





An *annaprashan* celebration (where a baby is given solid food for the first time) at an *anganwadi* in Tambadmaal village in Maharashtra's Palghar district

# Here and happening

**Childcare centres are at the heart of an endeavour to support and strengthen the Integrated Child Development Services programme**

**S**omewhere in a village in Rajasthan, Bhanwarlal Yadav is resting easy, comforted by the knowledge that the community he is charged with caring for is in better shape than ever, and primed to do better still. Mr Yadav heads the Jhilai village council in Tonk district and the satisfaction he feels is fuelled in the main by the progress his village – and its childcare centres in particular – has made in turning the malnutrition tide.

“Our *anganwadis* (childcare centres) were in terrible shape just two years back,” says Mr Yadav.

“We have nine in our village and every one of them was falling apart. The food served in them was barely palatable and the whole environment was unclean. Not surprisingly, Jhilai was doing poorly on nutrition. The government didn't care, the village council didn't care and we villagers didn't care.”

## **Safer zone**

Two summers down the line, Jhilai and its people are in a safer, more nutritious zone. The story of how it got there begins with the *anganwadis* of the village, the kickoff point for a transformation

encouraged and supported by The India Nutrition Initiative (TINI) of the Tata Trusts. “We refurbished one of our *anganwadis* and made that the model for the rest,” adds Mr Yadav, who was recently honoured by the central government's Ministry for Women and Child Development after Jhilai emerged as the best performing *panchayat* (village council) in India on nutrition awareness.

*Anganwadis* are the first stop and the last outpost in ensuring healthy village communities. There are some 1.3 million of them across the country and they are at the core





## REACHING OUT FOR CHANGE

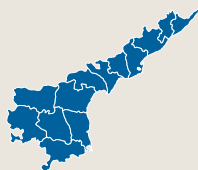
The 'making it happen' component in The India Nutrition Initiative operates in 11 districts in Rajasthan, Maharashtra and Andhra Pradesh. It has four broad segments:

- Refurbishing *anganwadis* to make them more useful for mothers, children and the community
- Extensive training and capacity building of community workers at childcare centres
- Mobilising and raising awareness in the community through events, fairs, competitions, etc
- Advocacy at the village, district and state levels with government officials and institutions

### Number of upgraded childcare centres



**Rajasthan**  
204 centres in  
5 districts



**Andhra Pradesh**  
253 in  
3 districts



**Maharashtra**  
100 in  
3 districts

of the nutrition challenge facing rural India. An all-woman battalion of workers helps run these centres, which are shepherded by the Indian government's Integrated Child Development Services (ICDS) programme.

ICDS is huge in scale and potential (it drew on government allocations totalling Rs410 billion in 2018-19). The scheme provides food, early education, primary healthcare and immunisation to children under six — and a variety of services to their mothers as well — in every nook and cranny of the country. Launched in 1975, ICDS has often been lauded as an exemplar for the developing world. But it has had an uneven ride, achieving much while falling short on many fronts.

### Entry point

To aid the ICDS cause is the overarching intent of TINI's 'making it happen' project. The entry point is the *anganwadis* and from there on to galvanising the community in tackling malnutrition and improving health outcomes. There are four components in this effort: upgrading *anganwadis* to make them more useful to mother and child; training and building capacity in the community workers at the centres; mobilising and raising awareness among households through events and fairs; and advocacy at the village, district and state levels with government officials and institutions.

The project is currently operational in five districts in Rajasthan and in three each in

Maharashtra and Andhra Pradesh. Through it more than 550 *angamwadis* have got the refurbishment treatment, the skills and knowledge of community workers have been enhanced, villagers have been educated about their entitlements and how to secure them, *panchayats* have been pulled in as partners, and data analytics has been used to improve monitoring.

The idea is to 'make it happen' for ICDS and therein lies the rub. Dogged by delays and slow to gather pace, the scheme languished for long. Finally, following a nudge from the Supreme Court, it was relaunched in 2002. "ICDS is wonderfully designed and very well thought out," says Ishaprasad Bhagwat, a programme manager with TINI. "The trouble is with

implementation. In many states it is nobody's baby. Children are not voters so politicians tend to ignore them."

### Women are vital

Children may not be but their mothers are, and there is no constituency more important to the well-being of the community than women. "Only the mother can ensure her child's good health; the rest of us are outsiders," says Dr Bhagwat. "We are reaching women through *angamwadis* and self-help groups. The objective is to get the right messages to them and to get them to behave differently."

Chameli Gupta, a mother of two from Sainthal village in Rajasthan's Dausa district, is part of the audience TINI is focused on.

"It feels nice to go to the *angamwadi* now," she says. "It wasn't like this earlier; there has been a world of change here. Women are counselled and children are taken care of. There's a proper toilet and piped water. Our kids get healthy food and a clean place to sit, to read, to play. What more would they want?"

The situation for women is changing alongside in places previously stuck in a rut on gender issues. "Education standards are up and our girls are benefitting," says Mr Yadav. Ms Gupta concurs. "Our girls have become progressive," she adds. "They go to school and college almost as matter of routine and many of them have formal jobs. *Ghoonghats* [face veils] are still around but they are disappearing fast."



Eggs form part of the nutritious meal at this *angamwadi* in Kondapalli village in Andhra Pradesh's Krishna district





A child at an *anganwadi* in Machhdi village in the Alwar district of Rajasthan

The training imparted to *anganwadi* workers is a key factor in the TINI endeavour and this has been a boon for women like Surekha Bhoje. An *anganwadi* worker for 11 years in Tambadmal in Maharashtra's Palghar district, she is glad the drab old days are gone. "The training and capacity-building have been tremendous enablers for us," she says. "The villagers are receptive to what we say. We make them understand

about food, vaccinations and the like. They tend to eat right these days — mostly."

Eating right has another dimension, of course — it takes money in the pocket to put food on the table. Poverty remains a sturdy barrier on the path to improved nutrition and illiteracy adds to the load. Mamta Khangar, a 25-year-old from Jhilai village, has to cope with both. She has three children and is pregnant with a fourth. The

*anganwadi* is a godsend for her. "I'm taken care of here during my pregnancy and my kids have a place to go to," she says. "We have a bit more money now so it's better. Otherwise we eat what we can afford to eat. After all, you need money to eat well, dress well and live well."

### Responsibilities galore

There is no dearth of requirements and fulfilling these is a complex task. The initiative itself is less so. "We have suffered a few falls but we get up and keep running," says Smriti Sharma, a programme officer who oversees the Maharashtra portion of 'make it happen'. "We are creating demand from the community through the system, we are doing more and more community-based events, and we are persistent with government officials. The positives from the ground make the work worth it. I just wish all our centres had electricity."

Nilesh Yadav, also a programme officer with TINI, believes the opportunity to partner the government is a boon. It is an occasional — and occupational — bane too. "This is a system strengthening initiative, which means there are challenges," he says. "We understand that we are there to support and to fill the gaps. We have given it our best shot."

"The gratifying part is that we are working with the government to make its nutrition mechanisms more effective and sustainable," says Dr Bhagwat. "Wonders can be accomplished if you really 'make it happen' — and it can be done." ■



# Staple strength

**Relatively easy to scale up and sustain, food fortification could become a potent weapon in India's war against undernutrition**

It delivers value for money, can be taken far and wide, and the efficacy of the exercise is undoubted. Food fortification is more than a fork in the road for an India driving further and faster forward than ever before to secure better nutritional outcomes. It is, rather, an essential ingredient in the spread of solutions being employed to realise the objectives of the National Nutrition Mission.

The surprise, if any, is that the country has not used the fortification of staple foods to a greater extent in combating the deficiency of vitamins and minerals that the majority of its citizens have to live unhealthily with. That is changing as the central government, through the Food Safety and Standards Authority of India (FSSAI), pushes the fortification envelope in collaboration with the food industry and civil society.

## Five-course solution

Salt, milk, edible oil, wheat flour and rice are the staples being fortified in India. Formalised through legislation in 2016, the effort has gained traction in the three years since. But the history of food fortification in India runs a lot longer. It began with the fortification of *vanaspati* (hydrogenated vegetable fat) in



A consumer buys fortified milk from a Mother Dairy booth in New Delhi

1953 and salt with iodine in 1962.

Despite proof of its effectiveness from across the world, dating back to Denmark in 1918 with margarine, Switzerland with salt and the United States with milk, both in 1923, there was no real momentum with food fortification in India, though. It's different now.

The cost-benefit ratio favouring food fortification and the comparatively short time span required for benefits to accrue are the most compelling reasons for its adoption. Evidence of the crisis

food fortification seeks to address is even more forceful.

Micronutrient deficiencies are widespread in India and nearly 75% of the population does not consume the required amount of essential vitamins and minerals.

The infusion of staple foods with these dietary essentials is crucial in battling what has been dubbed as 'hidden hunger'. FSSAI's executive director, Madhavi Das, is keen to emphasise that this is but one component of a larger ecosystem of wholesome nutrition. "We have initiated an



Double-fortified salt being procured in Uttar Pradesh through the government's public distribution system



## – PACKED WITH A PUNCH

### Food fortification facts

- There are **113** fortified (+F) brands available to Indian consumers in five staple food categories: milk, edible oils, salt, wheat flour and rice
- Milk and edible oils are the easiest to fortify and most readily available; wheat flour, rice and salt are much more difficult, one reason their availability is low
- About **15 million** litres of fortified milk is purchased by every day
- About **300** million Indian consumers can access some form of fortified edible oil
- **86** countries have around the world have legislation to support fortification
- **17** states and **4** union territories have adopted fortification in India, where the practise is voluntary
- The best performing states on fortification are Uttar Pradesh, Kerala and Odisha

### What fortification delivers



#### Milk

Vitamins A and D



#### Edible oils

Vitamins A and D



#### Salt

Iron and iodine



#### Rice

Iron, folic acid, vitamin B12



#### Wheat flour

Iron, folic acid, vitamin B12

‘eat right movement’ and our message is simple: you need to eat safe and healthy,” she explains. “The safety piece is a precursor to wholesome food; you cannot divorce the two concepts.”

There are challenges aplenty in getting the fortification equation right for India, less so with technology than in bringing on board the organised food industry that has to execute the formula (the unorganised sector is a bridge too far at this point). The FSSAI method is to convince and cajole food businesses to join the Nutrition Mission, not enforce through regulatory diktat.

“Any legislation works as well or as badly as the level of acceptance in the system,” says Ms Das. “One of our most important efforts has been to ensure that the food distributed through government channels – midday meals in schools, the Integrated Child Development Services and the like – is fortified. It’s an uphill task because there are budgeting, logistics and other issues.”

FSSAI has crafted fortification standards for the five staples in the list, published technical manuals and created a logo (+F) to highlight the presence of premixed micronutrients in packaged food products. “We also encourage food businesses to share best practices,” says Ms Das. “The idea is to keep the conversation going.”

The alliance with the food industry reflects the collaborative culture on nutrition that FSSAI, among the most dynamic of government institutions, has

cultivated since its inception in 2011. The India Nutrition Initiative (TINI), the flagship programme of the Tata Trusts in the sphere, has been committed partner in the venture alongside other foundations, nonprofits and civil society entities.

### Early supporter

The Trusts have been lending a hand to food fortification from before the expanded model was rolled out. A team from the Trusts helped in setting the standards for fortification and the organisation has backed FSSAI with advocacy, training initiatives, awareness campaigns and capacity building. Notably, the Trusts have been supporting the Food Fortification

Resource Centre (*see* Resource force on *page 22*), which is embedded in FSSAI and works with a spectrum of stakeholders to propagate and promote fortification.

“We realised that food fortification had not been fully utilised in India, though the country started out early with it,” says Rajan Sankar, the programme director for nutrition at the Trusts. “Fortification is widely used across the world and with the changing structure of the food industry and changing behaviour patterns – the move away from subsistence agriculture, urbanisation, women in the workforce, etc – more people are dependent on packaged food. Scaling up fortification will





## Resource force

The most steadfast supporter that the Food Safety and Standards Authority of India has for its fortification project is a small unit that resides within the organisation. The Food Fortification Resource Centre (FFRC) is advocate and enabler, focal point and lightning rod in a journey where many miles have been covered and where many more remain.

Established in 2016 and sustained with backing from the Tata Trusts, the 10-member FFRC has played a comprehensive part in finding food fortification a place at India's nutrition table. That includes setting standards for fortification, offering technical assistance to food businesses, implementing government programmes and deepening public awareness.

"Our role has been to provide end-to-end support for food fortification on a scale that has not been seen previously," says Rujuta Pandav, a deputy lead at the centre. "We have helped apply standards, benchmark and formalise

procedures, brought the industry to our side and published technical inputs and manuals."

En route the FFRC has worked closely with food businesses, various development partners and a bunch of central and state ministries. To build awareness at the ground level, it has reached out to consumers from cities, towns and villages, in malls, schools, online platforms, community gatherings and rural childcare centres, and through radio, TV and social media.

"An environment is being created to enable fortification," says Rohini Saran, also a deputy lead with FRCC. "Our primary challenge is supply and demand. Food businesses sometimes argue that there is no demand for fortification. States and ordinary consumers, in turn, say fortified products are not available in the market."

There are other challenges as well. "Fortification directives come from the central government but the supply chain in each state differs and nutrition is a state subject," adds Ms Saran. "Also, the states face budget constraints. We need more resources and more cohesion."

increase the intake of essential nutrients in the population. That's why we prioritised it."

The 2016-19 period has been about growing and learning for the fortification programme and its successes have been considerable. Close to 50% of all packaged edible oil sold in India is now fortified and this reaches 300 million people. Half of the milk produced by the organised sector has micronutrients added to it and double fortified salt is increasingly coming to the public's notice. Wheat flour and, particularly, rice lag far behind but the gap should be closed in the days ahead.

The path to fortification is

straightforward enough. The first question is whether a food commodity is fortifiable — *dal* (or lentils) are a tricky proposition — and, second, depending on how sophisticated and consolidated the relevant industry segment is, what proportion of it can be boosted with micronutrients.

On the technical side, there is no uniform method to add micronutrients to the five staples on FSSAI's radar. With milk and oil, fortification is clear-cut and can be done on a large scale. Not so with wheat flour, rice and salt. These foods may be ready for a full dose of fortification but food businesses do not have the

capacity and the technology is complicated. The most difficult bit, however, is ushering a bigger number of consumers into the fortification circle.

The layperson is still likely to miss the +F logo but that, too, will change as awareness campaigns gather strength and the symbol becomes more recognisable. "We have a long way to go," says Nishita Panwar, a programme officer with TINI. "These are baby steps we are taking; we require more advertising and communications. The need is for consumers to look for the +F logo on the food packets they buy. That will happen sooner than later." ■



Aditya Madan, a Swasth Bharat Prerak posted in Punjab's Mansa district, at a workshop for adolescent girls

# Made to motivate

**Swasth Bharat Preraks they are called, a band of believers bringing a “breath of fresh air” to the National Nutrition Mission**

I grew older by three years in three minutes,” says Shailendra Shukla, recounting the flare up at a meeting of childcare centre workers that he had convened in Aliganj in Uttar Pradesh. “They were from a village that was performing badly on nutrition indices. I was pushing them to do better and they were stonewalling me. Then one of the workers loses it and starts yelling at me. Soon others follow her lead and the place erupts — 70 women shouting at me, the lone male in the room.”

Mr Shukla “managed to deal with the situation somehow,” pacifying the irate gathering before bringing them over to his point of view about pulling together for the nutrition cause. It was another small

victory for Mr Shukla, a 32-year-old Lucknow boy and lapsed engineer nearing the end of a 15-month work stint that has provided him with first-hand experience of the struggles and the successes that arrive intertwined at the frontlines of the malnutrition battlefield.

To solve and resolve is in the nature of the job for Mr Shukla, a Swasth Bharat Prerak (or motivator) who is one among a band of 370 men and women helping with implementation, coordination, monitoring and more in the National Nutrition Mission. A partnership initiative involving the Indian government's Ministry of Women and Child Development and the Tata Trusts, the *prerak* programme (SBPP) is all about

## SBPP spread

**Prerak strength**  
**370**

**Districts covered**  
**360**

**Geographies**  
**27** states and  
**6** union territories





providing support. Its pillars are the *preraks*, placed inside governmental administrative setups in districts across 27 states and six union territories of India.

The *preraks* are selected — many of them through campus interviews at elite institutions — and trained for a 12-month fellowship programme. Mostly young, entirely enthusiastic and with an inclination to make a contribution in the rural hinterland, they are tasked with a bagful of

responsibilities. Crucial among these is coordinating the nutrition efforts of multiple government ministries and departments at the state level and in the districts.

Technical competence, management skills, leadership abilities and a commonsense approach in dealing with the complexities of administrative functioning characterise the *preraks*. They operate under the district collector's office and interact with a range of constituents: women and

children, *angamwadi* (or childcare) workers, officials, village councils and the wider community.

SBPP is based on the 'Zila Swachh Bharat Preraks' archetype developed for the Swachh Bharat Mission, the path-breaking endeavour for a cleaner India. The attempt is to duplicate in nutrition what the Zila Swachh Bharat Preraks accomplished in sanitation. Launched in January 2018, SBPP was ready to hit the ground running when the Nutrition Mission got underway two months later.

### Hands full

There has been much running for the *preraks* to do: training *angamwadi* workers and assisting in the rollout of software that reduces the paperwork they are currently burdened with; managing and monitoring community-based nutrition events and fairs in villages; implementing projects to upgrade childcare centres; and interacting with officials across the governmental hierarchy to improve coordination. The *preraks* have their hands full.

"This was my first experience in a government environment and I learned how the system works," says Neha Sharma, a 32-year-old who trained as a dentist and is posted in Jaipur district. "I also learned about the community and the issues they face. I got solutions for these issues from the community itself. You have to listen."

Dr Sharma, recruited for the programme from the Tata Institute of Social Sciences (TISS) in Mumbai while she was completing



A health awareness camp in Bandipalem village in Andhra Pradesh





Eggs are on the menu at this childcare centre in Kondapalli village in Andhra Pradesh

her master's degree, has seen the truths of life in rural Rajasthan at close quarters. It is not a pretty sight. "Malnutrition is never really considered a disease," she says. "Villagers don't know about stunting and wasting in children. Unless the child is skeletal in appearance, they ignore the problem. Going to a health centre or a doctor could mean a day's wages lost for the parents."

From the government's side, what's expected of the *preraks* is high. "There was little time to settle in," says Prachi Mishra, a 28-year-old *prerak* from New Delhi who has been attached to the Lucknow hub of the Nutrition Mission in Uttar Pradesh for the past eight months. "The official machinery thought I would know everything, but I was new to nutrition. I had so much to learn: about the mission,

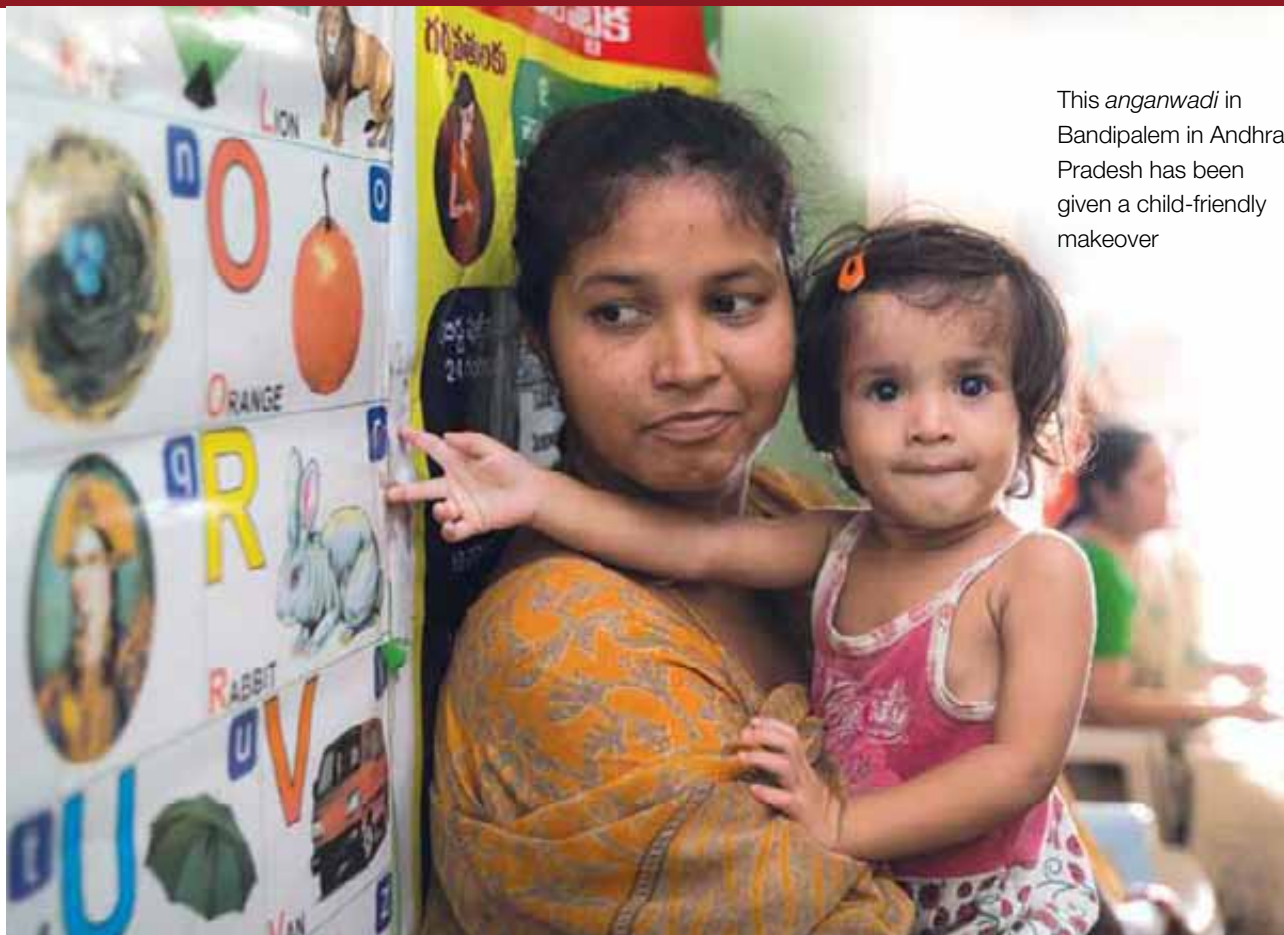
the programme, the jargon even."

The early days in the job are inevitably the trickiest for the *preraks* and a big part of it lies in arriving at a win-win equation with the local administration. Mr Shukla, who has worked with villagers in Fatehpur and Lucknow districts, had an up-and-down time of it. "I have been with three district programme officers in the Mission and each was different," he says. "The first was helpful from the off. The second was difficult to start with but I earned her trust quickly enough. The third was the toughest of all; I couldn't meet him for the first seven days. Turned out very well in the end, though."

For the *preraks*, it pays to understand what to keep in focus. "*Anganwadis* are at the core of the mission and I concentrated my attention there," says 27-year-old

Tilak Parewa, who was with the Swachh Bharat Mission as a *prerak* before the nutrition project beckoned. Also a TISS graduate, Mr Parewa has worked in the Banswara and Dausa districts of Rajasthan and is richer for the knowledge gained. "You have to understand the structure, identify problems and devise solutions. If it's transformation you seek, you have to go to the top – and you need help from the top."

The bottom line is getting the job done. "You have to be resourceful and ready to undertake any task that may come up on any particular day," adds Mr Shukla. "You cannot afford to dwell on what you cannot change; you have to get on with the job at hand. You have to quickly learn the government's way of functioning. Officers at the district level are



This *anganwadi* in Bandipalem in Andhra Pradesh has been given a child-friendly makeover

always welcoming of someone who is willing to go the extra mile. Personally speaking, I've learned that you don't have to wield power to get good work done."

The Tata Trusts were meticulous with the selection procedure for the *preraks*. "One of the objectives of this project is to introduce young and budding professionals to the realities of rural India," says Preeti Sharma, head of human resources with The India Nutrition Initiative (TINI), the flagship programme of the Trusts in nutrition. "We have hired from premier educational institutes and experienced people as well, several of them from the social sector."

Ms Sharma and the recruitment team sifted through more than 10,000 applications to settle on the 370 *preraks* now in the programme. One reason for the rush is the attractive compensation on offer — ₹55,000

a month — among the highest for a fellowship in India. TINI could afford to be picky.

### Trained to deliver

Training the new recruits is a rigorous and intensive affair. The *preraks* spend time at the central and state headquarters of the Mission ahead of being deployed in their district. "Our recruits include doctors, engineers and MBAs," says Ms Sharma. "We don't expect them to come from a nutrition background but they need to know the basics of the subject. We orient them and we have experts from the ministries and UNICEF to educate them about policies and processes, malnutrition and the logic of the initiative."

"The first rule we tell the *preraks* about in training is that they have to work with the system, not 'manage' it," says Bhuvaneshwari Balasubramanian, who heads the

programme. "There's no guarantee that a smart *prerak* will be a winner. You have to factor in the government ecosystem he or she works with and the dynamics among the different players involved. But I would say 99% of our *preraks* are wiser for the experience of being in the project. As for the government, a smart young resource is definitely a plus for any administration."

The central government wants the Trusts to expand the programme and have *preraks* positioned in every one of India's 719 districts. It's easy to see why. "They are a breath of fresh air," says Gayatri Rathore, the secretary of Rajasthan's Women and Child Development Department. "They bring a third-party perspective to the Nutrition Mission and they are in a pivotal position to tell us what is going right and where we are lagging." ■

# From GoMo to more



A training workshop for GoMo's sales force in a village in Uttar Pradesh

## Healthy bites

- GoMo is a legume-based snack; its main ingredient is split yellow pea flour
- It is rich in proteins and is fortified with key nutrients
- GoMo sells in packs costing ₹10 and ₹20 in three flavours
- 1.2 million packets of GoMo have been sold thus far
- 927 'social entrepreneurs' sell the product

**A** crunchy, munchy snack food with health benefits may seem like a contradiction in terms. GoMo is not and that is unusual. Just as unusual are the ingredients that have gone into the creation, selling and sustaining of a breakthrough product that emerged from a chance meeting in 2016 between Tata Trusts Chairman Ratan Tata and Stephen Badger, the chairman of American confectionary giant Mars Inc.

That meeting was the starting point for what promises to be a long and fruitful relationship for the two institutions involved. The first outcome of the coming together is GoMo. There are more in the pipeline for a partnership based on a shared vision of better health and nutrition. The goal is to build a nutrition platform through which tasty, healthy and locally made products can be brought to the market.

There is a double bonus in the GoMo initiative, which in its current avatar is aimed at the rural populace. Apart from nutritional benefits for consumers, the supply chain of the undertaking is designed to provide entrepreneurs in villages with livelihood opportunities. Uncommon collaborations of the kind are par for the GoMo course.

The ongoing phase of the project commenced in January 2019, when the product was launched, and it is spread over 13 districts in Uttar Pradesh and Maharashtra and Gujarat. Mars handles the manufacturing at its facility in Khed in Maharashtra and the Trusts drive community-based sales. There was the option of reaching GoMo to people through

government nutrition programmes. The venture has chosen what is reckoned to be a superior path.

The Trusts are developing a network of social sector enterprises to market GoMo. The conduits are women entrepreneurs in villages who intersperse their sales pitch with messages on nutrition. The idea appears to be working: in excess of 1.2 million packets of GoMo have been sold thus far and more than 1,700 village women earn sales commissions.

These 'social entrepreneurs' make upwards of ₹1,000 a month but there is more to it than the money. "I was a housewife and the house was my world. I was bored of it; I wanted to get out and do something," says Shikha Verma, a 26-year-old from Palhari in the Barabanki district of Uttar Pradesh. "Becoming a social entrepreneur was my way out."

The different strokes theme has been a constant with GoMo. The product was developed in association with the University of California, Davis, and the St John's Research Institute, Bengaluru. Yellow peas, rich in protein and fibre, are the base ingredient and clinical trials established the nutritional value of the newbie on the snack block.

GoMo has set the stage for the Tata Trusts-Mars combo to look farther afield in nutrition. "We want to have farmer groups from whom we can procure [raw food material]," says Mansharan Seth, an advisor with the Trusts. "We are also working on a product for pregnant and lactating women. Down the line there could be other foods, forms and shapes delivering nutrition in a fashion similar to GoMo." ■





Patients at the Regional Mental Hospital in Nagpur

# Heads **up**

**Compassion and quality in the care and treatment of the mentally disabled underpin Udaan, a programme that places its faith in institutional reform and community awareness**

**T**here's a hint of quiet desperation in Prem Dangi's voice as he reflects on why he has been in and out of mental health institutions for two decades. "My mind keeps breaking," he says. "If I take my

medicines regularly and if I stay straight – no alcohol and no cigarettes – I can be as normal as anybody else. But abstinence is hard for me."

Life and luck have been hard as well on Mr Dangi, a 45-year-old

Nagpur native who struggles with the burden of bipolar disorder. "In the bad times all I do is think and think and think," he adds. "I have got to this point by improving bit by tiny bit. I work when I'm well and I get admitted when things go

downhill. But I'm sure I can find a way to avoid coming back here."

'Here' is the Regional Mental Hospital in Nagpur (RMHN) and it has been Mr Dangi's home for the better part of 10 years. With a family that, he says, has not been supportive, the unmarried Mr Dangi needs sustenance and understanding, medication and care. He is not alone. Nearly 150 million people in India have some manner of mental illness. Fewer than 30 million seek treatment and at least 10 million of them have to cope with severe mental disorders.

### Behind walls and bars

Established under British colonial rule as the Nagpur Lunatic Asylum in 1864, RMHN typifies institutions of its kind, facilities created to sequester behind walls and bars those with mental disorders, suiting the demands of a society fed on stigma and prejudice about such conditions. How, then, can care and treatment at these institutions be made more humane, more patient-centric and more rehabilitative in nature?

That's the question at the heart of Udaan (or flight), a Tata Trusts' programme designed to help bring dignity, first and foremost, to the care and treatment of India's mentally disabled. Undertaken in collaboration with the Maharashtra government, the idea is to 'transform through reform'. The RMHN effort is one half of the Udaan initiative and what emerges from it could inform how standards at government mental health facilities in India can be radically improved.

Udaan's second big component, widely disbursed and with the potential for greater impact, is the 'district mental health programme' (DMHP). A community-based intervention under which about 200,000 people have been screened thus far for mental ailments, the programme is currently operational in four rural subdivisions of Nagpur district. DMHP aims to provide the blueprint for a mental health mapping of the entire population of Maharashtra, and a more accessible treatment procedure for those who require it.

The last constituent in Udaan is the most recent. Activated in February 2019, this is about developing a 'technical support unit' to help the Maharashtra government fashion an integrated mental health package that enhances the availability and quality of care. In the package are training modules for mental health workers and data analytics to measure the nature and extent of mental disabilities.

The RMHN piece of the Udaan endeavour is concerned with institutional reform. The need for it was immediate when the programme kicked off in March 2016. One of 43 government psychiatric hospitals in the country — many of these are more than 100 years old — RMHN was ripe for a recast of its functioning. Most importantly, the hospital needed a sea change in the way it viewed and cared for patients.

RMHN has much going for it. Sprawling over a 52-acre campus in Nagpur city, on paper it serves a

## India scenario

- Nearly **150** million people suffer from mental disabilities
- Fewer than **30** million seek treatment
- More than **10** million have to cope with severe mental disorders
- Depression and anxiety are the leading causes of mental illness

Sources: National Mental Health Survey, 2016; Census of India, 2011

## Flight of belief

The Udaan project is primed to provide a blueprint for institutional and community-based care and treatment of the mentally ill in India

### Institutional reform

- Developing the Regional Mental Hospital, Nagpur, as a centre of excellence
- Launched in August 2016, the project is expected to serve as a model for psychiatric institutions to emulate

### Community-based care

- The 'district mental health programme' boosts awareness of mental health issues, enables early detection and provides treatment closer to the patient's home
- It will cover a population of 5 million and is currently operational in Nagpur district
- About 200,000 people have been screened thus far for mental ailments through the programme

populace of some 24 million from 11 districts in the Vidarbha region. Unusually for a public hospital, it houses just over 500 patients against a capacity of 940. Knowledge about the care and treatment of mental disabilities resides within the institution, but there were several organisational facets crying out for an overhaul when Udaan made its debut.

### **Wanted: empathy**

Improvements were required in quality of care and infrastructure, patient welfare and recovery. Crucially, RMHN was lacking in the empathy that is essential when treating the mentally unwell, human beings at their most vulnerable. Udaan has, in the three years since its launch, set in motion a process of change that addresses these deficits. The intent is to modernise and remodel the institution, to make it a centre of excellence and learning.

Encased within a participatory framework that includes patients and staffs, with inputs from independent experts and senior government officials, Udaan has employed a four-pronged approach to move ahead. Structural reform, process and clinical reform, staff training and capacity building and, not least, individual care for patients — the programme has covered plenty of ground in its quest to make the everyday lives of RMHN's inmates less of an ordeal.

The raft of upgrades at the hospital have resulted in refurbished wards, an upcoming day-care centre and automated data management to streamline patient

tracking and treatment. Cleanliness and personal hygiene are priorities now and the programme has gone far in providing patients with simple comforts: a movie club, televisions and phones in the wards, a library, open spaces, a meditation room, dance sessions, hair salon and beauty parlour, a buffet system for meals, in-house farming and coloured clothing instead of drab uniforms.

The effects of the enhancements on patients and the institution have been enormous. "The movie club, the library and televisions are welcome; they give our minds some comfort and quiet," says Shubhangi Gavai, who has been at RMHN since 2001. Abandoned at an orphanage when she was six-months-old, the 30-year-old Ms Gavai spent most of her life in shelters before being moved, permanently it appears, to the hospital. "Everyone needs support and I don't have anyone on the outside to give me such support. This hospital is my only option."

Getting thus far has been a slow and steady slog for Udaan, part discovery, part adventure and all hard work. A lot remains to be done — the hospital's sewage system is a stinker and fixing its decrepit pipes and drains has been a work in slow progress — but the way forward is clear after a breaking-in period when the gravest concern was having staffs at all levels accept and implement the recommended changes.

News about the Tata Trusts stepping in was met with hesitancy and, worse, suspicion by the personnel at RMHN. "They feared

that the Trusts were going to take over the hospital, that their workload would increase," says Praveen Navkhare, a long-serving psychiatrist and the deputy superintendent of RMHN. "We laid misgivings to rest and we convinced our people that we were striving towards a common goal: the betterment of our patients."

Staffers were surveyed, workshops conducted and training imparted to allay apprehensions. A committee comprising staffs, patients and others paved the road to reform and into the RMHN lexicon came terms such as ward champions and master trainers. The emphasis in those initial days was on getting the hospital staff behind Udaan, particularly the attendants, the first and most frequent point of contact for patients.

### **Monotonous protocol**

The monotonous protocol entrenched at the hospital — with the dress code, the meal system, keeping patients locked in wards, etc — had to be ditched. "Our biggest worry was patients running away and preventing that took precedence," says Anagha Raje, a social service superintendent who has been with RMHN for 28 years. "Fear was the weapon used to keep patients in line. None of the staffs wanted to venture beyond prescribed job duties, nor did they want to adopt a different way of working or thinking. There was no reward in doing so."

Caregivers in the mental health setup have it tougher, arguably, than their counterparts in other medical-care segments. The



## Minefields of the mind

It's the elephant in the room that society would rather wish away than deal with. Mental disorders tend to have that effect on the supposedly sane and the reasons for it range from cultural taboos and familial shame to media portrayals of mental illness and plain old misinformation.

That should not be. The World Health Organization estimates that mental and neurological disorders are the leading cause of ill health and disability globally. Mental disabilities are truly universal and they can be triggered by a variety of psychological and social factors: genetics, poverty, inequality, abuse, trauma, childhood experiences, bullying, isolation and substance abuse.

The most common worldwide are depression and anxiety, followed by bipolar disorder, schizophrenia, substance abuse, post-traumatic stress disorder, eating disorders and dementia (keeping with the trend, depression and anxiety are the leading causes of mental health problems among working age-adults in India and China). Surveys show that women are more susceptible, that there is a clear link between poverty and mental disability, and that more young people than ever are reporting mental distress.

In countries such as India, low on resources and mental health knowhow, the situation is exacerbated. It doesn't help that less than 1% of the country's national health budget — already at bare-bones level — is allocated for the care and treatment of mental illnesses. On the bright side, India was the first developing country to launch a 'national mental health programme', back in 1982. The 'district mental health programme' came as an added layer in 1996. Neither has accomplished enough.

The Mental Health Care Act, which became law in May 2018, has gone further than any



previous legislation to “protect, promote and fulfil” the rights of India's mentally ill. There are complications with the new act, though, mainly the lack of clarity about where the resources to implement it are going to come from.

No matter the law or their programmes, governments at the centre and the states cannot by themselves do justice to the needs of people laid low by mental disorders. Philanthropies, nonprofits and civil society have to pitch in and that is where organisations such as the Tata Trusts have made a contribution.

Through grants, collaborations and direct implementation, the Trusts have for more than 40 years supported projects and institutions working to help India's mentally disabled. The Udaan initiative reinforces the commitment of the Trusts to the cause of mental health. It could well be the most impactful of the lot.



A community health worker with a family in Pilkapar village that was surveyed under the district mental health project

conditions in which they work are hardly favourable and at RMHN the situation is further cooked by an acute shortage of staff. Chronic and continuous, this has been a crippling impediment. “The work pressure is crushing,” says Seema Kshirsagar, a nurse at the hospital for six years. “I just don’t have enough space, time and energy to devote to patients. It can get pretty frustrating but we have to cope.”

What’s being accomplished at RMHN is, in the context, out of the ordinary. “We have learned and we have changed,” says Ms Raje. “It started with human rights and what this means in our context. Our perspective is

different now; we have found a better way to discharge our duties. Patients have got their identity back, they have found some purpose, they know about their rights and can insist on them. They can picture a day when they rejoin their families and reclaim their lives. I have never seen this happening in all my years here.”

### Yearning for more

The wish list for more improvements at RMHN runs long. Dr Navkhare is hoping the hospital will score higher on sanitation, get a new sewerage system and won’t lack for medicines. Ms Kshirsagar says RMHN needs an emergency centre,

much like an intensive care unit in regular hospitals, and a focus on rehabilitation. Ms Raje would like to see patients being treated by a team and for the hospital to set an example. “We cannot afford to go back to the old ways,” she says.

Madhuri Thorat, RMHN’s medical superintendent, juxtaposes the good and the indifferent in her reading of the institution. “Small things have gone a long way in bringing colour and happiness to the lives of our patients,” she says. “Our limitation is staff shortage. We need to create new posts but we haven’t even been able to fill the posts we do have. Overwork stresses out our staffers, especially

attendants and nurses, and we are beginning to see their health suffer as a consequence. We need more people. We need more resources.”

The DMHP module in Udaan is not beset by the sort of troubles that have stymied the hospital. Initiated in early 2018 and covering a population of five million, the programme’s primary objective is to create a collaborative, community-based model that boosts awareness of mental health issues, enables early detection and provides treatment closer to the patient’s home. Making the model replicable means that it can be implemented in the rest of Maharashtra and elsewhere.

### District agenda

What has been proposed and is being executed is a partnership with the state’s public health system at the district level. In the pipeline are a mental health helpline, day-care centres and halfway homes. Once-a-week clinics have been set up in four rural hospitals in Nagpur district as part of the programme. This will help in classifying and identifying mental disabilities in the community and bring sufferers into proper treatment streams. Additionally, it will reduce the cost and improve supply of medication.

The screening process in DMHP has led to about 600 people with mental disabilities receiving medical attention. One of them is Pallavi Tajne, a 26-year-old from Brahmani village in Nagpur district. Diagnosed as psychotic at 15, she had been treated at private clinics for three years before her father, Tukaram Tajne, recently

stumbled on the DMHP clinic at Kalmeshwar Rural Hospital.

Mr Tajne, a retired accountant, has spent in excess of ₹30,000 from his meagre savings on Pallavi’s treatment. Being in the programme will ease the financial load. “She lacks any real understanding of the world around her and she has these spells when she becomes uncommunicative and distant,” he says. “My hope is that this treatment makes her better. Her mother and I will support her for as long as we are around, but what after that?”

Sachin Bansod, a 22-year-old from nearby Ghorad village, is another who stands to benefit from the programme. “My son lost his mental balance when he failed his standard X exams,” says father Sudhakar Bansod, 56, a former mill worker who now ekes out a living as a security guard. “I’ve spent my earnings of the last five years on him. He’s my only son and I have no choice, but I can’t do it anymore.”

The stigma of mental disorders is stronger in rural areas than in urban centres and that makes it tougher for patients like Pallavi and Sachin. “Our job is to seek out and find those with mental problems,” says Archana Satpute, a community health worker with the central government’s National Rural Health Mission. “Not every family we visit is willing to admit they have a member with a mental disability. It’s not like when someone has a heart condition or cancer.”

Ms Satpute is an ‘accredited social health activist’, better known by the acronym Asha. These

activists are the mainstay of the screening-and-detection operation in DMHP. “Patients get care and medicines closer to home through this programme,” adds Ms Satpute. “They don’t have to go to Nagpur or to a private clinic; they save on money and time. We have 10-15 people come to our weekly clinic in Kalmeshwar and the service we deliver is a lifeline for them.”

### Partner fantastic

Be it with the hospital or the district programme, the glue holding it all together is the Maharashtra government’s involvement in what is the first-ever partnership in India between a philanthropy and a state to reform psychiatric care and treatment. “This is an immense example of political will and it’s not happening because there’s a vote bank for it,” says Tasneem Raja, the programme lead for Udaan. “We want to see this scaled up and scale will only come through collaboration with the government.”

Udaan has taken flight and it is climbing still. “I would say we are at a success rate of 60-70%,” adds Ms Raja. “We have not crossed the stage of reforming structures; this is going to take a little more time.” Beyond the specifics of the enterprise itself, Ms Raja lingers on the dividend to be had if civil society learned to care. “Each one of us has a role to play if we want change to happen in mental healthcare. All of us have a stake here and together we can make a difference.” ■

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*By Philip Chacko*



# ‘Every day is a new journey’



Vijayalakshmi Ravindranath is one of those lucky few whose calling is their passion. A neuroscientist of rare distinction, she belongs to an elite band whose work may seem esoteric to the layperson but that, rather than dimming her accomplishments, serves to highlight them.

Founder director of the Centre for Brain Research at the Indian Institute of Science (IISc) in Bengaluru, Dr Ravindranath got her PhD from the University of Mysore before going on to complete her postdoctoral training at the National Institutes of Health in Bethesda (Maryland, USA). Following a spell at the National Institute of Mental Health and Neurosciences in Bengaluru, she helped establish the Gurgaon-based National Brain Research Centre (NBRC), an autonomous central government institution, and moulded it into a hub of excellence.

Currently involved in research devoted to understanding the molecular mechanisms underlying neurodegenerative disorders such as Alzheimer’s and Parkinson’s, the 65-year-old Dr Ravindranath opens up on a range of issues in this interview with **Christabelle Noronha**.

**What drew you to neuroscience as a career and when did you realise that this was the field of study you wanted to pursue?**

I actually graduated with mathematics and physics and did my masters in organic chemistry. I dropped biology in middle school. For my PhD I studied an interesting problem in chemistry with biological significance. That’s what drew me to biology.

Once you start understanding how the brain works and performs, it becomes a fascinating voyage from which there is no coming back. Besides, brain research brings together so many domains – mathematics, computation, biology and, of course, chemistry. I had a steep learning curve and I’m still learning. Every day is a new journey because you are learning new things about the brain and how it functions.

The enormous burden of brain disorders, in India and elsewhere, is distressing. You see people with mental illnesses suffer but they can’t even articulate their pain. There isn’t much empathy for them because of the stigma attached to mental disability and there are no cures for most brain disorders. I felt this was where I really wanted to make a difference. I have

been often asked why I am still working at this age, but I am very clear – this is a great opportunity to make a difference.

### **Are brain disorders genetic?**

Some are. Throughout our lives we have almost the same number of neurons we are born with. The nervous system's development is the first to start and the last to end. Mutations that occur in most genes will affect the nervous system. We believe that mental illnesses have a genetic component and are overlaid with the environment. These together cause the problem. That means multiple genes and multiple environmental triggers.

Because we don't understand how the disease is caused, we are not able to treat it fundamentally. All we end up doing is provide symptomatic treatment, and this is what we do with almost all mental health problems. We are only controlling the symptoms, never reversing what led to them in the brain function.

### **Is dementia a cluster of all of these related brain disorders?**

Yes, dementia is a set of symptoms that affect our cognition and it can be caused by a variety of factors. As for Alzheimer's, there is a lot of accumulation of several different kinds of proteins. Normally, proteins are turned over (modified proteins are broken down and new ones synthesised). The more we probe, the more we realise that with age the brain becomes unable to deal with this turnover, and hence proteins tend to accumulate. The dementia that we commonly see is of a mixed kind where multiple factors contribute to the overall syndrome.

Our neurons don't multiply; the neurons we are born with are what we die with. New neurons are formed but in very small numbers. Somewhere with age our ability to turn over these proteins decreases. So our ability to break down the proteins and clean them away also decreases, causing accumulation. The accumulation is not the cause of the disease, we know that, but the protein clearing is affected as we age and that enables the disease to advance.

We believe that the brain works on a simple principle – 'use it or lose it'. The more we use the brain, doing more challenging tasks, learning new languages, new skills and forming new connections, the more it helps. If one withdraws from everything and spends a sedentary life without mental stimulation, those connections will wither away. It's a natural deterioration of the brain. It's important that as we age we continue to engage with and learn new skills. Mindfulness is a good way to make sure we are attending to things.

### **You helped establish NBRC in 1999. What did the centre set out to accomplish and has it been successful?**

This was the first centre for brain research in India. When I was given charge of the institute, the first goal was that it should act as an apex

***“Once you start understanding how the brain works and performs, it becomes a fascinating voyage from which there is no coming back.”***

coordinating centre for brain research in India and, two, that it should have a unified approach to understanding the brain. I believe strongly that complex biological systems cannot be understood without the rigour of mathematics and computation. What was easy to discover has been discovered. What we have left are very difficult things to discover.

I started putting the centre together by hiring people from different domains to bring together a diverse set of talent. We realised it was impossible for us to get an affiliation with a university to award PhD degrees so, in 2002, I went to the government to apply for the centre to be granted the status of a university, which the government did. That gave us the chance to recruit computer engineers, radiologists and specialists from other streams and give them a neuroscience degree.

NBRC was the first neuroscience research centre in India. Today our community has definitely grown and I feel that the centre has played a big role in making that happen. A lot of students who graduated from NBRC went abroad and have come back as faculty. Now, with that unified approach that we had, there is a much more active and lively neuroscience community of younger people.

#### **How important, from a professional perspective, was the return to IISc in 2009?**

I gave 10 years to NBRC. The director's job, especially that of a founder director, was not easy. There was a lot of stress and my own research suffered. I felt I should return to my research and also felt it's good for the leadership to change in institutions. I informed the government about my decision to leave NBRC, and this was without having a job. Padmanabhan Balaram, the former director at IISc, asked me if I would like to set up a centre for neuroscience. It was an absolute joy because if you want to set up a neuroscience centre there can't be a better place than IISc, with its strength in engineering and mathematics.

#### **Are you still working with nonhuman primates in your lab?**

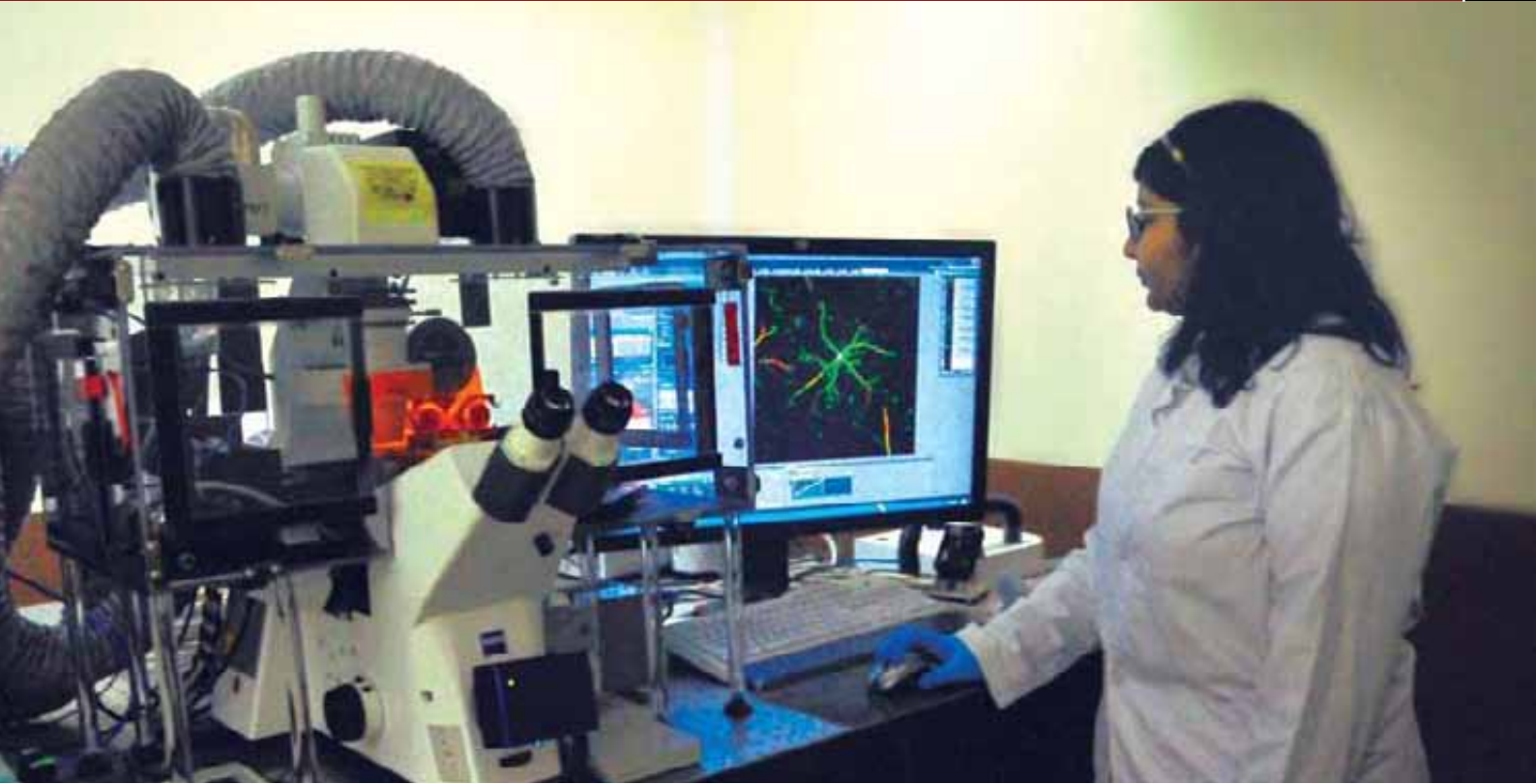
I don't work with primates but other researchers do, because primates are closest to humans. We completely renovated the primate centre at IISc and modified it such that we could use it for neuroscience experiments. We have one of the best centres in the country, equivalent to any similar European centre. Primates offer us useful insights on the brain. I also work with mice; we can introduce human genes in them and produce the same symptoms of disease.

#### **How far has India come in neuroscience research, and the outcomes related to such research, since you began your career?**

Hard to say because, worldwide, the inputs into neuroscience have been enormous. The 1990s were designated the 'decade of the brain' by [then American president] George Bush Sr. This led to a spurt in funding and

***“We believe that the brain works on a simple principle — ‘use it or lose it’. The more we use the brain ... the more it helps.”***





The Indian Institute of Science was the perfect place to establish a neuroscience centre, says Dr Ravindranath

a remarkable rise in neurosciences around the world. Understanding the burden of disorders, people started setting up huge centres for autism and Alzheimer's, especially in the United States, where they were able to lure researchers working in other domains of science by giving them huge research grants.

If you look at per capita productivity in science, India is on par but we are still a very small group of neuroscience researchers. In America, for example, the Society for Neuroscience meets every year and 30,000 people attend it. There are 12,000 to 14,000 presentations made there. Here, the Indian Academy of Neuroscience's annual meet is attended by fewer than 300 people.

The future in neuroscience belongs to people who can bridge different disciplines. We have, somehow, failed in India to develop mega biomedical research projects, which is where the world is going. Biology is too complex to be attempted by a few individuals alone (in the United States this was done by awarding large grants to multidisciplinary research groups). The same applies to cancer research; we need to have big projects. Then huge data sets can be generated, computation experts can analyse the data and large-scale studies of people can be done. That is what we need considering our large population and the burden of disease we carry.

**Tell me about the research study you are doing on Alzheimer's at IISc. What is special about the study?**

Alzheimer's and related dementias (AD) are a group of devastating age-related brain disorders that affect our memory and other vital cognitive functions that define us as humans. Although AD is essentially a disease of the ageing brain, recent research has indicated that the initiation and slow progression of the disease begins two-three decades earlier. Research on AD



Researchers at the Centre for Brain Research at the Indian Institute of Science

at IISc is focused on studying the earliest changes that occur, the idea being to develop rationale therapies that can delay the onset and/or slow down the progression of the condition.

We are doing these studies at two levels. Traditionally, research is carried out in reductionistic systems (cells/animal models) and the insights are then translated to humans. However, such an approach has failed to result in treatments for AD. In fact, in the last decade expenditure of over \$15 billion has not yielded a single drug. Our strategy is to carry out longitudinal studies in ageing human subjects; this encompasses a variety of tests.

Through these studies we will be able to identify the risk and protective factors in our population. They will inform our intervention strategies and reduce the burden of dementia. The Tata longitudinal study of ageing is the first-of-its-kind in the country and we hope to continue this for several decades [the study is an initiative by the Centre for Neuroscience and IISc with support from the Tata Trusts]. In our vision, these studies could be a landmark for dementia in a manner similar to the Framingham studies that changed the way we treat cardiovascular disease.

Another unique aspect of AD research at IISc is that these studies on human subjects are dovetailed with experimental studies in mouse models to identify early molecular changes. Our research has shown that changes occur at one month of age in AD mouse models, while the overt disease is seen only at seven-eight months. Also, women are affected more by AD and this is now being modelled in mice with a view to understand the gender difference. ■

# Skilled in seeking out jobseekers

**The 'skill mitra' project puts disadvantaged youngsters in four states on the path to long-term employment**

It's never easy to find a job in these economically strapped times, especially if you're a school dropout with minimal skills. That's when you need someone like Jagdish Chippa.

Mr Chippa is a 'skill mitra' (or friend) and he seeks out unemployed youth. His operation zone is a set of villages in Rajasthan and his information sources include schoolteachers, *panchayat* (village council) members and local elders. His aim: to find men and women aged between 18 and 35, with dim job prospects and willing to learn a skill – and provide them a shot at job or livelihood opportunities.

In his 10 months in the Skill Mitra programme, Mr Chippa has placed about 70 youngsters in training. Many of them have set up their own small businesses and one of them is Sonesh Sharma of Fatehpura village, who learned motor winding and repairing and now runs a small shop where he mends fans and assembles coolers. Another is Ramesh Kumar, who fixes mobiles and sells accessories.

There are thousands of success stories like these in the skill mitra programme, a grassroots initiative by the Tata Trusts that reaches out to needy youngsters in backward areas. It involves counselling of



Women painters-to-be at a training centre in Sirohi in Rajasthan





## Skilling mantra

'Skill mitra' works in four states of the country to provide livelihood opportunities to youth

Has reached out to

**64,000+**



Counselling provided to

**35,000+**

Skilling and training given to

**17,000**



Livelihoods secured for

**12,500** people

Average earning of those placed in jobs:

**₹10,000** per month



## Friend indeed

The approach of the project is personal and effective. This is how the process unfolds...

### Skill mitras

- Each mitra covers 15 villages
- Meets 8-10 youngsters daily
- Creates awareness through videos and discussions
- Registers youngsters for counselling

### Counsellor

- Conducts one-on-one counselling
- Meets 3,000 youngsters a year

### Programme head

- Identifies opportunities for on-the-job training
- Seeks out skilling opportunities in local training institutes

### Placement opportunities

- Skilling centres
- On-the-job placement

these youngsters and their parents, appropriate training and skilling, and the pinpointing of livelihood opportunities.

Launched in 2016 in the Ajmer district of Rajasthan, the skill mitra programme has been extended in the years since to four more districts: Nuapada in Odisha, Sirohi in Rajasthan, Mahasamund in Chhattisgarh and Krishna in Andhra Pradesh. The project has thus far reached out to more than 64,000 young men and women. Most importantly, it has enabled some 12,500 of these youngsters to get proper jobs (with an average monthly salary of ₹10,000).

The Centre for Microfinance (CmF), an associate institution of the Trusts, is the implementing organisation for the skill mitra programme in Sirohi. In Ajmer, it is the Grameen Evam Samajik Vikas Sansthan, in Nuapada and neighbouring Mahasamund it is the People Awareness for Rural Development Agency, and in Krishna the Centre for Peoples Forestry.

### **Connected to convince**

Individual skill mitras are the backbone of the programme and Pallabi Sahu, a 23-year-old from Nuapada, is one of them. Ms Sahu has connected with, and convinced, about 1,200 people to receive some form of skilling or training. Among them is Lakshmi Pande, 25, a homemaker turned owner of her very own tailoring establishment. “We send women for training to the textile hub of Tirupur in Tamil Nadu,” says Ms Sahu. “Some of them have got jobs there. Some, like Lakshmi, are coming home to set up small units.”

Skill mitra, which began life as an offshoot of the Trusts’ interventions in urban migration, was conceptualised to do precisely that. “We realised that youngsters, particularly school dropouts, were limited to daily-wage jobs,” says Nishant Maloo, programme officer with

the Trusts. “Many of these were hazardous, but they had no options.”

The Trusts tried to find a way to address the root causes of the issue, which was the lack of employable skills in youth and inadequate livelihood opportunities. That led to the development of the skill mitra idea, which has been designed around the combination of outreach, counselling, skilling and employment.

The districts in the project have been selected based on need. For instance, economically backward Sirohi is a tribal area and Nuapada sees 70% of its working-age population migrating because of poor job prospects locally. The skill mitra initiative tries to mitigate the problem with a saturation coverage approach. “We cover a chosen area thoroughly so that there are sustainable benefits,” says Mr Maloo.

The programme has a target of training 3,000 beneficiaries in a block (or sub-district) over a three-year period and there are 10-12 skill mitras in each block (a total of 110 in all) to do the heavy lifting.

The process, from selecting potential beneficiaries to getting them livelihood ready is straightforward. The mitras attend local fairs, village council meetings and the like to meet parents and community members. They identify the youngsters, talk to them about the need for skilling, and register them under the programme. That’s when the counsellors come into the picture.

There is one counsellor for every block and their role is to hold face-to-face sessions with the participants. “I conduct personality tests, whether they have any technical aptitudes, whether they prefer to take up a job or start a small business,” says Amresh Kumar Sharma, a counsellor in Sirohi who meets 200-300 job-seeking youngsters a month. “We want to know how and where they see themselves in the future.”

Getting these fledglings into the employment saddle is, of course, the most



Many of the youngsters have been trained as motor mechanics

challenging aspect of the programme. Jobs are scarce in rural India, a reality that Ravi Kant has to grapple with all the time. The programme manager heading the skill mitra initiative in Sirohi, Mr Kant has a lot on his plate. “We do surveys of the local job market, evaluate the trades that youngsters can take up, find local training partners, and we tap small businesses willing to take on trainees,” he says.

There are different sets of livelihood-generation opportunities that skill mitra has plugged into. There are the government-supported institutes that offer vocational training and most of them have a job-placement component. Add to these, the skilling facilities set up by private sector companies as part of their corporate social

responsibility spread (such as sewing classes from Singer India, beautician courses from Ambuja Cement Foundation and painter courses offered by Asian Paints).

Local businesses — shops, hotels, medical clinics, etc. — are yet another source for jobs. The youngsters are placed as salespeople, assistants, waiters or housekeeping staff in these establishments, where they receive on-the-job training and are able to earn while they learn.

### **Mentors show the way**

A third way for skill mitra is to have these youngsters attached to a micro business where he or she can be personally tutored by the owner in how to run a small enterprise. The owner-tutor is known as ‘udyog mitra’ (or business friend). The nature of these micro enterprises is diverse and they include beauty parlours, construction works, auto repair shops, grocery shops and dairy farms.

“There are in excess of 500 udyog mitras and they are businesspeople who stand to benefit from having a helping hand,” says Mr Kant. “We place youngsters who we think will fit well and we give a guarantee to the owner that departing trainees will not become local competitors.”

The skill mitra scheme has brought welcome relief for Dau Singh, a resident of Godaji village in Sirohi. Having learned painting in the Asian Paints skilling initiative, he undertakes painting jobs in his village. Mr Singh now makes Rs12,000-15,000 a month in profit, while also providing employment as udyog mitras to other locals.

The skill mitra programme has opened new horizons for thousands of youngsters like Mr Singh. By linking jobless youth to businesses in need of people, it has proven to be a bridge to social betterment. ■

*By Gayatri Kamath*



# Model makeover

**More than a million people have benefitted from an initiative that is transforming 265 Andhra Pradesh villages**

It's peak summer and the mercury is touching 45°C in Nandigama, but the heat is no deterrent for Suma Malini. A government development officer for whom this town in the Krishna district of Andhra Pradesh is another stop on a 23-village watch, Ms Malini is braving the elements to check the progress made by a community-based programme.

The 'village development plan' (VDP), as the programme is called, aims to improve a total of 265 villages in the state. Multi-themed in nature and extensive in scope, the programme covers water, environment, health and other issues, the idea being to turn these villages into model villages.

Based on the Indian government's model village initiative, the Sansad Adarsh Gram Yojna, the programme was launched in August 2015 by the Andhra Pradesh state administration in partnership with the Tata Trusts. The overarching objective is to improve the quality of life of more than a million people spread across Vijayawada rural parliamentary constituency.

Proper sanitation and waste management facilities, tanks and pipes for drinking water, a drive to improve the green cover, awareness camps and more, VDP takes in a lot. What makes the programme different is its collaborative focus on micro-planning for village



A meeting of the village development committee underway in Bandipalem village in Andhra Pradesh's Krishna district

# All for a cause

In partnership with the state government, the 'village development plan' aims to upgrade 265 villages in Andhra Pradesh's Vijayawada parliamentary constituency, home to 1.1 million people, into model villages. Key outcomes of the programme:



**20** parks and **13** burial grounds developed



**256** village development committees set up



Drinking water for **79** villages



**49,600** tree guards and **208** cycles provided for plant watering

**115** water-storage tanks constructed



**195** sheds built for solid waste management



**250** three-wheelers and **40** battery-operated vehicles provided for waste disposal

development, bringing together multiple state ministries, district-level authorities, *gram panchayats* (village councils) and NGOs, all pulling together for grassroots development.

The VDP project started with a baseline study to determine what village communities need most of all. The requirement for toilets stood out, with nearly 90,000 households in the target area

lacking proper sanitation facilities. The Trusts were asked to supervise the toilet construction component and the Trusts and its associate organisations were involved in the task, which got a further boost with the central government's ambitious Swachh Bharat Mission (clean India) initiative.

It soon became clear that many households could not afford the cost of

constructing a toilet. Though the state government reimburses the amount invested by households in toilet building, payments were taking time to reach the accounts of villagers. A solution had to be found urgently.

The Tata Trusts created a revolving fund through which the NGOs in the project paid the contractors on behalf of the villagers. This money is later reimbursed to the NGOs. Over the past 15 months, more than 20,000 toilets have been built under VDP.

### Sanitation shining

The Tata Trusts team interacted with different suppliers and vendors and standardised the quality of toilet construction. They ensured that costs were minimised and toilets, with necessary amenities in place, were built for less than ₹15,000 each. There were doubts to be dispelled, though, before such construction could commence.

Traditional beliefs meant that the villagers were initially reluctant to have the toilets attached to their homes. To counter the taboo the Tata Trusts organised volunteers to convince women – the biggest beneficiaries here – that toilets at home meant cleanliness and safety. This was part of a communication strategy that has worked well enough to ensure that all 265 villages in the project are now free of open defecation.

Toilets are one part of what has become a sanitation mission. The Trusts have provided technical and infrastructural support to help the villagers with solid and liquid waste management. There are 260 three-wheelers and 40 battery-operated vehicles to collect dry waste. To improve liquid waste management in the region, the Trusts have piloted the construction of soak pits in five villages.

Lack of safe drinking water was another



The park developed by villagers of Pathanaguluru in Krishna district

## Spark for a park

Working in favour of the 'village development plan' (VDP) is the fact that the community has stepped up to make the most of the programme. David Raju, a resident of Pathanaguluru village and a member of its development committee, is an example.

Mr Raju was part of a group of villagers taken on a Tata Trusts-arranged visit to Burugupudi, a model village about 150km away. "It was an eye-opener for us," he says. "We realised that we could also work on developing our village in a time-bound and planned manner."

Pathanaguluru, about 40km from Vijayawada, is one of the 265 villages where VDP is being implemented. About 1,500 people live here and, besides everything else, the villagers wanted a park where their children could play and their elderly could get some fresh air.

Working in coordination with the Trusts, Mr Raju got the park developed quickly. "The Trusts gave us the plants and the mesh and poles for the tree guards," he says. The new park has inspired the locals to plan for more improvements. "We now want to build a library in the park and the Trusts have promised to provide support."

This is not how it used to be for Pathanaguluru and its denizens. "In the past, things used to move at a snail's pace," says Mr Raju. "But after the setting up of the village committee, issues are taken up quickly and the government departments also respond promptly."



problem, with some 80 of the villages suffering seriously as a consequence. This has been tackled by constructing more than 115 storage tanks and installing 35,000 metres of water pipelines in the villages.

Reviving landscapes left barren by rampant tree-cutting for fuel is another exemplary aspect of the VDP initiative. The Trusts, in partnership with NGOs, are working to encourage villagers to plant trees and improve the green cover. To improve the survival rate of the plants, the Trusts have supplied nearly 50,000 tree guards to the villages.

The embrace of VDP by the community as a whole has seen villagers raising funds for the programme from different donors and people's representatives. "We have made VDP a non-political effort that is acceptable to all parties," says Rajendra Babu, the Tata Trusts' regional manager for Andhra Pradesh. "It took us some time to do this but we've succeeded."



Villagers from Rayanapadu in Andhra Pradesh's Krishna district have converted household waste into wealth through composting

The setting aside of space for parks and burial grounds is among the unusual features of the programme. Also on the menu are telemedicine centres to monitor and treat noncommunicable diseases, villagers being made aware of health insurance and insurance companies being pushed to set up branches in the region.

### Change that lasts

The difference VDP has made to the everyday life of the community is clearly visible, says Mr Ramesh Babu who has been managing on behalf of the Trusts. "There are about 1.1 million people in these villages and their expectations have shot up since the programme's launch," he says. "The greatest enthusiasm for it is among women and youth."

Technology has been among the most effective instruments in driving the project forward. The Trusts and their partner NGOs, village representatives, government administrators and legislators are all connected to one another and every village development committee is in WhatsApp and other social media groups that includes senior government officials.

The need to make the initiative self-sustaining has seen the Trusts segue towards capability building. "The next two years will see growing responsibility transferring to the village groups," says Mr Babu. "The Trusts are there to lend support, but we want them to operate independent of us."

The exertions of the Trusts to cement and push forward the VDP agenda have been appreciated. "I'm happy to say that the Tata Trusts team that works with us truly has the pulse of the village folk," says Ms Malini. Better still, the Trusts have shown that this community-centric approach to village improvement can be replicated almost anywhere in India. ■

By Nithin Rao



Internet saathi Jyoti Som (right) with her wards in Akhepur village in the Meerut district of Uttar Pradesh

# Digital goes rustic

**More than 25 million beneficiaries in 248,700 villages — the internet saathi project has been a voyage of discovery for rural women learning about the worldwide web**

**S**martphones, internet searches, browsing the news and plenty more of a similar, digital bent are not terms one typically associates with women in India's villages. Yet these have become familiar for many millions of the country's rural womenfolk thanks to a long-running and continually inventive effort centred on getting them internet-educated.

The internet saathi (or friend) programme, a collaboration between the Tata Trusts and Google that kicked off in 2015, has at its heart an idea plain as day: using digital technologies for social transformation. Internet saathi has translated that idea into reality through an

initiative where the results have been eye-popping.

Under the programme, more than 69,000 rural women in 248,700 villages in 18 states of India have been trained to teach some 25 million rural women like themselves what the internet is about and how to use it to improve their lives. Internet-enabled devices, usually smartphones or tablets, are the tools of instruction and the learning, in keeping with the medium, happens in quick time.

The *saathis* are rural women with basic literacy and they are signed on for the programme with the help of local NGO partners. These women are trained and





Sarita (left), an internet saathi from Gujuki in Rajasthan's Alwar district, helps women from the village understand what the net is about

## Learning to surf

The internet saathi initiative began as a pilot project in 5,000 villages in Rajasthan in 2015. It has had a striking impact since...

Implemented in **248,700**  
villages in **18** states



More than **25** million  
women trained in internet usage



**69,000+**  
saathis do the training

**7** in **10** women accessed  
the net for the first time through  
the project



equipped to educate other women to use the internet as well as social media tools. Over a six-month period, each *saathi* must train at least 600 women from two-three villages. The *saathis* connect through WhatsApp groups and meet once a month to exchange notes and share their experiences.

The reason why rural women are the focus of the project is simple: they, more than any other demographic in India, have always been on the losing side of the so-called digital divide. India has been connected to the internet since 1995 but — as a survey done 20 years later revealed — only one in 10 rural internet users in the country was a woman.

### Everyday discrimination

This statistic could have been a reflection of the everyday discrimination that rural women face within the family and in the community. It was also a telling detail about how these women were being left behind in a world where the internet is becoming ever more powerful and influential.

“India is one of the fastest-growing markets for internet usage, and it has the widest gender gaps in this usage,” says Neha Barjatya, who heads the Foundation for Rural Entrepreneurship Development (FRIEND), an associate organisation of the Tata Trusts.

Something had to give and it has. Change has come on the back of big leaps in technology and infrastructure, falling prices and rising penetration, and growing awareness of how smartphones and the net can be harnessed to good advantage. The government has played its part and then there are initiatives such as internet saathi, high on potential and on-field outcomes.

Internet saathi is based on the ‘train the trainer’ model. Google has provided the technology, smartphones and internet connections, while the Trusts have brought



their vast experience in rural interventions to the table. The most critical of the components that make the programme a success, however, are the *saathis* themselves.

Rohini Shirke is an example. A resident of Adulpeth village in Maharashtra's Satara district, Ms Shirke did not have a smartphone until she became a *saathi* in 2014. Since then she has been using the internet to promote her modest beekeeping business even as she instructs village women on how to be net savvy.

As a *saathi*, Ms Shirke has helped her village sisters promote micro-businesses such as poultry rearing and tailoring. Her prominence in the community has led to her being nominated by the women in her village to contest the local *panchayat* (village council) elections. "I would like to help poor and undereducated women become independent," she says.

"The *saathi* is the most digitally literate person in the village, someone who's looked up to for advice," says Ms Barjatya. "The reason the programme has worked so well is that it has become an integral part of the community. The *saathi* sees digital literacy in the specific context of the needs of the women she is training." Internet *saathi* started with a pilot project involving about 5,000 villages in Rajasthan. The link between digital literacy and income generation came to the fore immediately, with around 40% of participating women saying that they soon found additional ways of earning more money, as well as new ideas for investing this money.

"We identified digital literacy among rural women as a focus area," says Raman Kalyanakrishnan, head of strategy at the Tata Trusts. "We realised that the internet could become a vital life skill for these women." And that's how it has turned out.

FREND has been crucial in embedding the programme, not least by connecting beneficiaries to livelihood opportunities. It

has been a journey of discovery for the learners and the teachers in equal measure. It has been fun, too, with the women warming up to the net in a hurry.

Beyond seeking out means to enhance their income, the women in the programme have begun to better understand the world around them. Accessing government welfare schemes, net banking, news and more has become commonplace and the difference this has made is obvious.

### A different education

"The internet has been available to rural audiences for long, but it was used mainly for entertainment and to browse social media," says Mr Kalyanakrishnan. "These women were able to find uses that were more beneficial to them in their daily lives. The programme has provided an alternative to the education they never received," adds Ms Barjatya.

Getting the women to sign on has, however, been a task sometimes. Jyoti Som,



Internet *saathi* Phoolwati (right) with a mother and her daughter in Alwar



Internet saathis learning the ropes at a training workshop in Dholpur in Rajasthan

a 23-year-old *saathi* from Akhepur village in Uttar Pradesh's Meerut district, trained 460 women in four villages between July and November 2018. "Some of the women I approached were reluctant to participate. It took time and several visits but I eventually convinced most of the women," she says.

### Freedom through literacy

Digital literacy and internet access are a form of liberation for rural women, many of whom are restricted by tradition and prejudices. "We have seen caste and religious barriers come down in some of the villages where this programme has been running," says Ms Barjatya. "*Saathis* who come from Dalit families are now treated with respect."

FREND has also been able to establish a revenue model in the programme by setting up a marketing and data collection platform. The *saathis* gather information on women and children, water and sanitation, and nutrition for external agencies. They

have also been instrumental in collecting vital data for the 'aspirational districts' initiative of NITI Aayog, the central government's policy think tank.

FREND, which has been a trusted implementation partner for the Trusts, generated revenues of ₹71.2 million in 2018-19. "We would like to see FREND grow and become a financially sustainable organisation over time," says Mr Kalyanakrishnan. The internet *saathi* programme is the bedrock on which that sustainability will be built.

The programme itself continues to stay apace as more villages and their women get covered. The objective is to create a network of 100,000 *saathis* across 300,000 villages by September 2019 and the Trusts and their partners are well on their way to achieving that. Clearly, India's rural women have found a guide to help them discover a whole new world of possibilities. ■

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By Vikas Kumar

# The will, the way

**Tackling the agricultural crisis in Maharashtra's Vidarbha region is the objective driving the Sukhi Baliraja initiative**

**W**ater — or the lack of it, rather — used to be uppermost in the minds of Jodmoha's residents. A village in the Yavatmal district of Maharashtra, Jodmoha is home to about 3,500 people and was, till about a year back, another victim of what is euphemistically referred to as farm distress. It's different now.

The erratic rains persist but Jodmoha is better equipped these days to cope with the inevitable troubles that dog farmers in many parts of India. The key reason for the improved tidings is the Sukhi Baliraja Initiative (SBI), a Tata Trusts-supported programme that has reached some 25,000

households in 320 villages across nine districts in the Vidarbha region.

Sukhi Baliraja, which loosely translates as 'happy farmer', has been operational for more than 10 years in Vidarbha and the principal ingredients in the intervention are the promotion of sustainable agriculture, soil and water conservation, the marketing of farm produce, enabling small-scale poultry and dairy enterprises, and providing psychological counselling and care for farmers.

The water component of the programme has been Jodmoha's salvation and it shows. "Our water bodies had run dry over the last decade," says Shankar



Women weeders in Shirasgaon village in Maharashtra's Yavatmal district, a target area for the Sukhi Baliraja project



Dhanpule, a 65-year-old farmer who grows cotton, soya bean and pigeon peas. “The groundwater level has gone up now and we are confident shortages will not recur.”

Streams were deepened and widened as the village went about shedding its water-stressed tag through the programme, which comes under the Maharashtra government’s ‘jalyukt shivar abhiyan’, an ambitious attempt that seeks to rid the state of drought.

### Desperate for help

Vidarbha is desperate for the help rendered by such interventions. Thousands of farmers in the region have been driven to suicide by a combination of crop failure, water scarcity and high-interest loans. Farm distress is an everyday reality and addressing it begins with finding the means to improve farm productivity and, through that, household incomes. SBI has been

engineered to do precisely that.

The initiative was launched in 2008 as a collaborative effort aligned to the state government’s Convergence of Agricultural Interventions in Maharashtra (CAIM) programme, which has reached out to households in Yavatmal, Amravati, Washim, Akola, Wardha and Buldhana.

The Tata Trusts put SBI in direct implementation mode in 2015, believing the shift would enhance scale and effectiveness. Water has been a priority issue and, within that matrix, irrigation has got primary attention. Groundwater recharging and the building of water-harvesting structures such as farm ponds, circular recharge pits and small dams have improved yields, increased the area under cultivation and reduced waterlogging.

With experience and expertise in implementing large water projects in the geography, SBI joined hands with the



A water user group meeting in Gardi village in Solapur

Government of Maharashtra and secured support from the Tata Consultancy Services Foundation to begin two huge projects in soil and water conservation. One was the rejuvenation of the former Malgajari tanks in five districts of Nagpur division in Vidarbha. The other was the revitalisation of the 42-km-long Kasalganga stream in Solapur district in Maharashtra. The response was good and the communities were mobilised into water user groups.

“Malgajari tanks were common in Vidarbha about 300 years ago,” says Bhakti Dhawle, a programme officer with the Tata Trusts. “However, they fell into disuse and farmers could not access water.”

Another significant part of the engagement pertains to spreading knowledge about good farming practices. SBI partners local NGOs and the Dr Panjabrao Deshmukh Krishi Vidyapeeth, the agricultural university in Akola, to train farmers in soil testing, seed treatment, summer ploughing, integrated nutrient management, vermicomposting, etc.

### Down with pesticides

The training is paying dividends. For instance, under the integrated pest management module cotton farmers have been weaned away from heavy pesticide usage, which increases the cost of production and leads to soil damage, without any justifiable benefits. “We raised awareness about the dangers of excessive use of pesticides and the farmers were open to change,” says Manoj Bande, who heads the agriculture unit at SBI.

Farmers now employ best practices in seed treatment, they are encouraged to grow a variety of crops, and they bank on traditional low-cost techniques to control pests and reduce expenditure on pesticides. More than 20,000 farmers have benefitted and the idea is to reach 500,000 more of them in about two years through digital

## Redress for distress

Sukhi Baliraja's mission is to ease agricultural distress and the effort has brought relief to farmers. It covers...

**23,970** farmers in  
**339** villages in  
**10** districts of Maharashtra

### Programme components

- Sustainable agriculture
- Soil and water conservation
- Market linkages
- Poultry and dairy farming
- Psychological counselling



platforms such as mKrishi.

Creating local farmer producer companies is another feather in the SBI cap. This makes eminent sense, given that it has always been a challenge for India's farmers to earn more from their fields. SBI has established market linkages and processing units to boost farmer incomes.

The marketing bit on SBI's menu of solutions has also been a boon, especially in the selling of cotton, a perennial





stumbling block for farmers in Vidarbha. “We have identified big cotton buyers and we try and convince farmers to sell their produce directly to them,” says Rahul Dabhane, who heads the Trusts’ operations in Vidarbha. “This helps farmers save on transportation costs and get better rates.”

SBI has set up an agriculture marketing entity to find assured markets and enable collective bargaining. Tata Chemicals and Rallis are buyers and the programme has got farmers to tie up with these two companies directly to sell pigeon peas and brown lentils. Similar agreements have been signed with other companies, including Dabur and Haldiram, and there is an avenue to sell through online platforms.

Soyabean has been another success story for SBI. A lot of soyabean grows in the Vidarbha region but farmers find it difficult to get seeds. The government provides these to only a third of farmers; the rest have to buy it from the open market at high cost. Three years ago SBI launched a project on 100 acres of land to generate soyabean seeds. Heavy demand has led to the acreage being raised, first to 500 and then to 3,000.

Soyabean seeds pulled in good revenues, but there was uncertainty about whether local processing plants would be able to handle the load. The Trusts approached the state government and won approval for a ₹15-million project to set up

processing plants. The project has 80% funding from the government, 10% from the Trusts and 10% from farmers.

Agriculture aside, SBI has laid the ground for households to take up alternate livelihood opportunities such as poultry and dairy farming to provide a buffer against crop failure. A pilot poultry project that kicked off in eight villages in 2018 in the tribal area of Dharni in Amravati district has led to the Maharashtra government asking the Trusts to implement it on a larger scale.

### Chicken run

This resulted in the upscaling of the poultry project, which now covers about 880 families in Amravati and Yavatmal. Women have been provided poultry sheds, 500 birds each to rear and appropriate training. They have also been organised into producer companies to fetch the best prices for their produce. These households are now able to earn about ₹25,000-30,000 every year being a participating beneficiary. The poultry model has been extended to Chandrapur district, where 2,000 tribal women are beneficiaries, and on the cards is a women-only poultry venture in Gadchiroli.

Similar in many ways to the poultry business is dairy development, another comprehensive livelihood intervention that has been a winner. Quality cattle feed, procured through a partnership with the





Members of water user groups from Jambhora village in Maharashtra's Bhandara district gather for a meeting

## Farmers go fishing

Small fish can bring in big bucks and the open-source fisheries project in Vidarbha, launched in 2018, is proving how. Small scale fisheries, to provide an alternative source of income when cash crops fail, are among the schemes being promoted in the region as part of the Sukhi Baliraja Initiative (SBI).

The Tata Trusts are implementing open source fisheries projects in three states — Andhra Pradesh and Jharkhand are the other two — and their potential to deliver extra money in the hands of farmers is proven. In Maharashtra, the project has three focus areas: knowledge creation and dissemination, ecosystem development and market linkage.

The Tata Trusts have supported more than 1,000 farmers in Yavatmal district to produce fingerlings (fish that are 60-90 days old). These fingerlings are sold to the government under a direct cash transfer scheme. This year, the plan is to train a thousand more farmers.

International Livestock Research Institute, and mechanisms for sale of milk have been put in place in 30 villages in Yavatmal.

The project involves bringing together women to sell milk to the National Dairy Development Board under an assured buy-back agreement. A milk producer company, with about 200 women, has been formed and a milk chilling centre has been established. The aim is to reach a capacity of 3,500 litres of milk a day in two years.

The counselling and care component in SBI may not fetch money in the manner that poultry and dairy does, but there is no underestimating its worth in a region where farmers taking their lives is no longer news.

Aiding in this fight are community-based microfinance initiatives set up under the project in 300 villages.

These community-based organisations have been strengthened and financial literacy initiatives launched to tackle the problems of farmers. The interventions have helped farmers access the various financial services available in rural areas.

All said and with everything that has been done, SBI has brightened the agricultural landscape of Vidarbha, bringing light where once there was little but gloom. The best part: this light is not going to die out. ■

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*By Nithin Rao*



Interaction with rescued child from Andhra Pradesh by SATHI staff  
Tabitha 2008-09

# Childhood regained

Reuniting missing and runaway children with their families is the forte of SATHI, a nonprofit that has had to navigate a raft of issues to make such ‘comebacks’ possible

About 250,000 children in India went ‘missing’ or ran away from their homes between January 2012 and March 2017. That statistic, from the Indian government’s ‘track child’ portal, means five children disappear every hour in the country.

Finding these children — oftentimes rescuing them — and reuniting them with their families is the challenge taken on by Society for Assistance to Children in Difficult Situation (SATHI), which has a

steadfast supporter in the Tata Trusts. A Bengaluru-based nonprofit set up in 1992, SATHI has, in the years since, helped some 77,000 kids get back to their families.

SATHI has worked in 45 locations in 14 states, mainly with children who have run away from their homes or have been separated from their families and end up at railway stations. It operates four temporary shelters (in Delhi, Varanasi, Kanpur and Pune) that come under the ‘open shelter’ project in the Indian government’s

Integrated Child Protection Scheme.

Finding these children is the first step in an endeavour that constantly faces multiple complexities. SATHI then provides them care at a shelter, guidance and counselling before, in its words, “making an attempt to reunite the child with [his or her] family”.

Children who run away from home or lose contact with their families face a life of hardship and, frequently, abuse. Many are victims of abduction and human trafficking. Their families, for their part, suffer the trauma of separation and loss, made worse by the reality that the chances of seeing their child again are slim.

### Many reasons for taking off

Children run away for many reasons, says Abhijeet Nirmal, manager, child protection and anti-human trafficking, with the Tata Trusts in Delhi. “It could be fear, domestic violence or failing in a school exam,” he says. “It might even be the dream of a better life in a big city.”

SATHI’s journey in rehabilitating children started at a time when the standard practice was to place these kids at government-run shelters. “Everyone assumed that there was some serious cause that led to children running away; consequently there was hardly any attempt to trace their families,” says Pramod Kulkarni, SATHI’s founder.

The flaw in the approach was made evident by the fact that many of the rescued children ran away from the government shelters they were forced into. That’s when SATHI began to follow the more difficult process of tracing the families of the children. This went against conventional thinking.

“We were criticised and funding agencies were apprehensive,” says Mr Kulkarni. “The feeling was that the child was being put back into the problem. But



## Runaway crisis

- Total number of missing children in India (2016): **111,569**
- Of these, around **60%** are girls
- Only around **50%** of these children are reunited with their families
- Number of untraced children in the 2009-2016 period: **315,000**
- Number of children traced fell from **61%** in 2014 to **50%** in 2016



we felt that this was a Western view of looking at things. In India family relations are much stronger.”

Even without such issues, child rescue is a thorny undertaking, probably among the toughest in social work. Practical wrinkles aside, there is the legal maze and endless government processes that have to be tackled. Given that SATHI spends much of its energy and resources with children who have somehow made railway stations their home, there are other problems as well.

### **Railway stations as homes**

The railway station-as-home factor is common to countless runaway and other children. And there is Indian Railways, far-flung, ubiquitous and cavernous enough for them to travel by anonymously (mostly without tickets). The children, the majority of them without any fixed destination in mind, tend to get off at a big station or terminus and look for ways to settle in.

That is the best time for an intervention, but even if this is a success there are jurisdiction issues. The railways come under the central government, whereas the police are part of the state’s

apparatus. Both have to be kept in the loop.

SATHI toiled for long to get the support of the central and state governments to minimise the processes and paperwork that child rescue operations entail. In 2010, formal mechanisms started being put in place to rescue children from railway stations. That means outreach, an understanding of child psychology and collaboration with several local authorities.

Advocacy by SATHI and likeminded nonprofits resulted in the Indian government’s Ministry for Women and Child Development and Indian Railways coming together to launch ‘railway childline’, a programme to find missing and runaway children. Since then the numbers of runaway children rescued from India’s railway stations and rehabilitated or restored to their families has jumped from less than 5,000 a year to nearly 30,000 a year.

SATHI focuses on big railway stations in the metros. “We look for children who are alone, crying or seem uncomfortable,” says Mukesh Yadav, an outreach coordinator with the organisation. His team operates out of a room provided by the Railway Protection Force (RPF) at New



Ten-year-old Manjeet from Jharkhand’s East Singhbhum district was rescued and reunited with his family in 2015



Children rescued from railway stations celebrate India's Independence Day at a shelter in New Delhi

Delhi station. The team works closely with RPF staff and also enlists the help of luggage porters, platform vendors and others who can be their “eyes and ears”.

Abhishek Sharma, who operates a water-dispensing machine at New Delhi station, is one such resource. He recounts an incident where he chanced upon two boys, aged four and six, wandering about looking lost. “The elder one had an Aadhaar card [government-issued identification] and that enabled us to trace his address to an east Delhi locality,” he says. The second child was taken under its wing by SATHI and later reunited with his parents.

Time is of the essence when dealing with runaway and missing children. “The sooner they are rescued, the better,” explains Mr Nirmal. “This ensures they are not influenced by someone with bad intentions, dragged into substance abuse or trapped by traffickers. The child is at its most vulnerable at this point. If someone offers help or food, they accept it instantly.”

Human traffickers keep an eye out for these at-risk children. “In return for free

food and a place to sleep, they make them work as bonded labour or push them into prostitution,” adds Mr Nirmal. “Reaching out to children who have been on the streets for longer is a bigger challenge. They have invariably been duped or abused and don’t trust anyone.”

### **Hub for traffickers**

As with everything to do with India, the numbers can be overwhelming. “Over half a million people visit New Delhi station every day and this is a major hub for traffickers,” says RPF inspector Omprakash Rawat. “On average, five or six runaway children are intercepted here every day.”

Once a runaway child has been picked up, the SATHI team follows a streamlined process before having the kid placed at its shelter. Once there, the children follow a regular routine, are provided food and clothes, and get to sleep on a clean bed. They also receive counselling and are kept engaged in a variety of activities.

Finding parents or family is among the toughest challenge facing SATHI because



Shahrukh with father Ishrar and mother Sanawar

## Shahrukh's story

"I was playing at the railway station near my home when a stranger approached me. He asked me to come with him to see famous places in Delhi. He also offered me work. I agreed because I wanted to see Delhi. But after we went to Jama Masjid, he left me."

This is what 12-year-old Shahrukh told the SATHI counsellor in New Delhi in August 2018 after someone called the 'railway childline' and he was picked up from the Jama Masjid area. But certain pieces seemed not to fit. A stranger entices a child and then abandons him?

The SATHI team spent time talking to Shahrukh, asking about his family, about his parents, his siblings... Finally, the boy spilled the beans.

Shahrukh's home – where he lived with his parents, two brothers and three sisters – was in Shamli district of Uttar Pradesh. His father was a labourer and his mother a homemaker. He had run away to explore famous places in Delhi. The Shamli railway station was close to his house and he boarded a train to Delhi.

The stranger Shahrukh spoke about was actually a fellow passenger in the train who, on seeing a lonely child, had tried to help. He took Shahrukh to Jama Masjid because the child said he lived there. As he seemed confident about returning 'home' on his own, the man left Shahrukh to his own devices.

The only telephone number Shahrukh knew was that of a teacher at his village school. It took several days for the SATHI team to connect with the parents and speak to them. Shahrukh stayed for 18 days at the shelter before his overjoyed father came to take him back home.

many of the children cannot tell where they are from. Once the child is rehabilitated, SATHI goes a step further. It follows up on some of the more vulnerable children and periodically sends personnel to check on how they are faring at home.

There is no one-size-fits-all solution when it comes to child rescues. Not all children are willing to return to their parents, especially those addicted to drugs or part of criminal gangs. "In such cases, we take them for a 30-day residential camp outside the city, after which we try and reconnect them with their families," says Basavaraj Shali, SATHI's chief executive.

### Self-sustaining is the call

As for the future, the Tata Trusts see the SATHI model as one that has to be scaled up further to be effective. "We are trying to pull away to make the model self-sustaining," says Mr Nirmal. For this to happen, the government needs to step in with financial support.

"The railway childline helps around 20,000 children every year, but the number of missing children landing up at railway stations could be 80,000 a year," says Mr Kulkarni. It costs ₹5,000-6,000 to help one child, and he believes that in two years close to full coverage should be possible.

That would take an annual budget of around ₹500 million. As of now that budget is ₹170 million, distributed among the roughly 100 NGOs operating across India in this field. "This is evidently too little," says Mr Kulkarni. "Ultimately, child rescue is the responsibility of the government and the project should be funded by them."

The sooner this and other forms of support are extended, the better it will be for the numerous children who have gone off the radar in India. ■

*By Vikas Kumar*



# A helping hand for healthcare

**Palliative care, skills training, the provision of equipment and volunteers — United Care Development Services works to plug gaps in the public health system**

**S**yed Nusrat Ali, a 55-year-old suffering from terminal cancer, lies weak and forlorn in his dwelling in Pahadi Shareef village, about 30km from Hyderabad. The silver lining

for Mr Ali — once a trucker and a smoker — is the palliative care he has been getting at home over the past year.

Mr Ali and his family are one among many being supported through painful



A doctor examines patients in Poddutur village near Hyderabad

times by the Hyderabad-based United Care Development Services. UC, as it is known, backs the Pain Relief and Palliative Care Society (PRPCS) which organises home visits by skilled doctors, nurses and social workers to help Mr Ali and other cancer sufferers like him cope with the disease.

Launched in 2009, UC is an unusual philanthropic platform that brings together donors, volunteers and NGOs to create social change. Its founder and director, P Gunaranjan, calls it a philanthropy exchange, working to provide a wider 'giving' platform.

#### **Four-point philanthropy**

UC, which is backed by the Tata Trusts, combines four kinds of philanthropy to maximise the impact of its work. The *chaar daans* (or four donations), as this has been termed, comprises volunteering (*shram daan*), donations in kind (*vastu daan*), waste donations (*kaachra daan*) and financial donations (*dban daan*).

The palliative care portion — operational in Telangana and Andhra Pradesh in partnership with PRPCS — is one of the more important services that UC provides. This benefits on a daily basis about 1,000 terminally ill patients like Mr Ali.

In the communities that UC works with, the troubles fuelled by cancer go beyond the condition itself. "There is fear and stigma attached to cancer," says Gayatri Palat, an associate professor at Hyderabad's MNJ Institute of Oncology. "Patients and their relatives often do not want to discuss the issue and, in some places, cancer is still considered to be contagious."

The institute handles about 12,000 new cancer cases every year and a large number of patients desperately require palliative care support. The dire shortage of such support, especially in rural areas and smaller towns, was what prompted UC to join hands with PRPCS in 2017. The

hospice started by PRPCS was one of the first-of-its-kind in India.

Backing for UC is part of a broader effort undertaken by the Tata Trusts in partnership with the Telangana government to build cancer care infrastructure in the state. The palliative care programme is a crucial component of this effort.

The Trusts' support for UC-PRPCS has led to eight district-level palliative care centres being opened in Telangana in the past 18 months. These centres provide aid to 80 inpatients and 500 home-care patients at any given time.

Apart from the centres, PRPCS also operates five mobile vans — one with backing from the Trusts — that visit patients across Hyderabad. "We have doctors, nurses and social workers and each of the vans can treat about 20 patients every day," says PRPCS president Jagan Nath.

As for UC, there is more on its health plate than palliative care. The nonprofit is involved in several health interventions in Telangana and Andhra Pradesh, among them 'arogya seva - health for all' (or ASHA), an initiative that exemplifies the endeavour to reach healthcare to underserved communities.

#### **Critical-care component**

ASHA works to improve emergency and critical care services at the Gandhi Hospital and Niloufer Hospital in Hyderabad and at the Government General Hospital in Vijayawada (Andhra Pradesh). Biomedical equipment, nurses for critical care and volunteers for patient assistance are provided as part of the initiative. About 120 critical care patients and 600 other patients avail of these services every day.

Skilling is another facet of UC's healthcare package. In 2018 it launched a mobile healthcare skills lab programme to provide training for patient attendants and nursing staff. About 50 patient attendants

## In the pink and for the public

United Care Development Services has pushed the envelope in extending public healthcare in Telangana and Andhra Pradesh. The numbers tell the story:

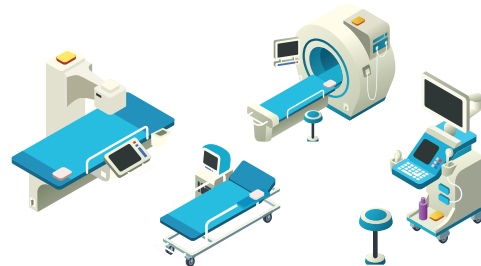


**22,059**  
intensive-  
care patients  
supported

**10,466**  
palliative  
patients served



**3.75** million patients  
reached by Health4All,  
an information system;  
used by **35** hospitals



**8** hospitals supported with  
medical equipment banks



**9,839**  
patient attendants trained

are trained everyday to provide home care for patients, and some 200 nurses and other healthcare providers have been trained in basic life support and nursing.

UC has also come up with the novel idea of a medical equipment bank. Currently used by eight hospitals and at several health camps, the equipment bank offers access to free biomedical equipment, made available where and when needed. UC has also trained a volunteer team to operate the equipment.

Rural healthcare is yet another area that UC has turned its attention to. It conducts monthly camps in rural reaches to provide free primary and preventive care health

services. Currently about 500 patients are served every month through these camps.

UC has also developed Health4All, a Free and Open Source Hospital Information system which has been deployed across 30 major hospitals in Telangana and Andhra Pradesh and is in use in another 15 free health clinics in Odisha, Chhattisgarh, Karnataka and Kerala.

UC's success lies in its fill-the-gap approach. Such thinking has enabled the organisation to extend the ambit of public healthcare services to underserved communities. ■

*By Nithin Rao*



Residents of Malijubang village in Odisha's Kalahandi district take an oath to fight malaria



# Fight against the deadly bite

Minimising the deathly damage malaria can inflict and helping eliminate the scourge in the longer run are the objectives of a community-led effort in Odisha

**L**achendra Sakadaka has come to learn much about malaria — and much more about the death and devastation it can cause.

A 29-year-old tribal from Turukupa village in Odisha's Rayagada district, Mr Sakadaka has lost two of his five children to the disease. Time was when he

thought that was the destiny of tribal communities like his, cut off from the modern world and its amenities.

Traditional healers were the first, and frequently the only, recourse for Mr Sakadaka and his fellow villagers when malaria struck, and they were no match for a killer disease that took no prisoners.

Mr Sakadaka may have suffered the same end when he went down with malaria a few months back. But he did not and helping him beat back the infection was a comprehensive malaria-control programme run by Tata Trusts in South Odisha.

The endeavour in Odisha is the most substantial of the four malaria-control initiatives undertaken by the Trusts – the other three are in Bilaspur in Chhattisgarh, Gadchiroli in Maharashtra and Gudalur in Tamil Nadu – for reasons that range from leadership and presence in the community to strong collaborations with the state government and civil society.

### Five-year plan

The current phase of the Trusts' intervention, called 'taking Odisha towards elimination of malaria', aims to rid South Odisha of deaths from the disease in five years and its incidence by 40%. There's more to the effort than that.

The Trusts have been supporting livelihood programmes in South Odisha since 2006 but these were not enough in a region where maternal and infant mortality and malnutrition existed alongside other development challenges.

"Without a comprehensive development approach that includes health and education, social and economic progress is unattainable in the Odisha hinterland," says Jayeeta Chowdhury, the former lead for the malaria control and elimination programme. "We make this possible through smart partnerships."

The health programme in South Odisha was initiated in 2009. The emphasis was on malaria because it was not just a biomedical problem but a socioeconomic issue, claiming the maximum lives in a place where health systems were either absent or in a derelict state.

In 2010, the South Odisha Malaria Control Programme – involving the Trusts

## PAINFUL PROBLEM

### Worldwide

**219 million**  
malaria cases

**70%** of the cases reported from India and 10 countries in sub-Saharan Africa

**435,000**  
deaths caused by malaria

Children under **5 years** accounted for **61%** of all malaria deaths

### India

**9.5 million**  
malaria cases

Country has the **4th** highest malaria burden in the world

**17,400**  
deaths caused by malaria

India reported almost **3 million** fewer malaria cases in 2017 than in 2016

### THE ODISHA SOLUTION

The programme kicked off in 2016 as a collaboration between the Tata Trusts and the Odisha government. The details:

- Focused on South Odisha, the objective is to ensure zero deaths from malaria in five years and reduce incidence of new cases by **40%**
- Nearly **100,000** people in **547** villages in three districts have been covered
- The backbone of the programme are **503** 'village health volunteers'
- Since 2017, there have been no recorded deaths due to malaria in the targeted area

and a network of partners — was rolled out. It started with a survey that laid bare the stark reality of the region: malaria and malnutrition were rampant.

The first phase of the programme, in 2014 and 2015, set the tone for its success, then and later. A community-based approach was adopted, with the focus on screening and treating malaria-positive patients living in high-transmission areas through camps. Important in this context was understanding the link between malaria and malnutrition, the treatment of affected children and, not least, selecting and working with the right partners.

This effort led to a decline of 60-80% in falciparum malaria in the target villages. It wasn't enough. The Trusts needed a fresh perspective and what followed was a collaborative strategy with the state

government as partner.

In 2015, the Trusts changed tack and took a plunge into direct implementing. A year later it cemented a partnership with the Government of Odisha. This enabled a scaling up of the programme and sowed the seeds for its sustainability. Rather than replicating the government's role, it allowed the Trusts to add value to the programme.

### South Odisha in the crosshairs

South Odisha being a malaria-endemic zone was the reason the Trusts made it the setting for their direct intervention programme. The magnitude of the problem and, most significantly, the cost extracted by the disease in terms of physical suffering and economic loss, were the prime motivators for the Trusts to remain invested in the initiative.

Odisha accounts for 40% of malaria cases in India, a country that is burdened with about 4% of global malaria cases (according to a report by the World Health Organization). India has set 2027 as the deadline to eliminate malaria and it is on the road to making that happen.

Consistent and continual efforts have made India a beacon of hope in the global battle against the disease. According to the World Malaria Report 2018, India was the only one among 11 countries to register a decline in incidence — 24% between 2016 and 2017 — among those most affected by the disease. And the country's success is largely due to a substantial decrease (about 80%) in malaria cases in Odisha.

The decrease has been striking in the remote and heavily-forested hilly regions where Mr Sakadaka and others from tribal communities live. Mostly landless or marginal farmers, these communities subsist by banking on forest produce. A malarial attack is an emergency for them in more ways than one.

“When I contracted malaria a couple of years ago, it cost me ₹1,500 to get treated

## ‘No longer are people in my village afraid of malaria’

*Namanta Majhi of Kannadi village in Odisha's Rayagada district speaks about her experience of being a 'village health volunteer' in the programme:*

It has been a big challenge working as the village health volunteer [VHV]. It takes two-three hours of walking through difficult terrain to reach our village. There are just 81 of us in Kannadi and we did not have even basic health facilities before the anti-malarial programme came here.

Malaria is a perennial problem in villages like Kannadi. When the Tata Trusts launched their intervention in October 2016, it was very difficult to organise the community. The process, however, became easier after I was selected as the VHV.

We have been successful in controlling malaria. Malaria cases have come down and there has been a reduction in its prevalence. Our biggest success has been in preventing deaths due to the disease. No longer are people in my village afraid of malaria.



at a private clinic,” says Basanti Lundruka, a 20-year-old from Turukupa. “That was a huge amount of money for me.”

Beyond the obvious health and monetary benefits, there was the realisation that every other social development programme in the region would be undermined if malaria was not tackled on a priority basis.

The Trusts joined hands with the Government of Odisha in March 2016 and the agenda was cemented: malaria control and prevention, along with research and technological innovations that would improve the quality of lives of people in the southern districts of Odisha.

The state government committed itself to bearing much of the cost of the initiative: for rapid diagnostics kits, anti-malarial drugs, insecticides and volunteer wages. The Trusts were tasked with rolling out the programme in remote tribal villages where services were slender.

Five district subdivisions in South Odisha – Muniguda, Bissamcuttack, Thuamul Rampur, Lanjigarh and Kotagarh – were chosen as the focus areas. The rough and tough terrain made it difficult for the project to get running in quick time, and there were other challenges as well.

### Difficult to access

“The villages where we work are dominated by tribal communities and they are not easy to access,” says Subhasis Panda, senior general manager, Livolink Foundation, the Trusts’ partner in the project. Add to that a lack of knowledge about health.

Reaching the scattered tribal hamlets can take up to three hours on foot and that’s the only way to go. Inundated rivers and streams during the monsoon months, the dangers posed by wild animals and reptiles and finding trained people were problems confronted and overcome.

A pillar of the programme has been



Tula Majhi from Kamarpadar village in Kalahandi district survived a malaria attack when she was pregnant

village health volunteers (VHVs), youth in the 20-35 age bracket chosen from within the community. The VHVs have been trained and certified under the National Vector Borne Disease Control Programme (NVBDCP), an umbrella initiative launched by the central government.

VHPs are the frontline workers, the boots on the ground, in the fight against malaria in Odisha. They are deployed in villages where there are no regular health workers. They are the first respondents in any fever episode in the village. They ensure early tests, prompt treatment and follow up for treatment compliance.

For Kumuwadi Dei, a septuagenarian



A malaria awareness camp being conducted in Bandapipli village in the Kandhamal district of south Odisha

from Turibhejiguda in Kalahandi district, the VHV in her village, Srimati Majhi, was a life saviour. “She gave me the medicine, ensured I took it on time and even prepared food for me,” says Ms Dei.

The VHVs have, additionally, improved the general health of the populace and the Odisha government has approved a proposal to allow the volunteers to provide medicines for other ailments at what are known as ‘fever treatment depots’. “It shows the competence of the VHVs and the trust that they have generated,” says Mr Panda.

### **Multi-pronged strategy**

The Trusts have adopted a multipronged strategy to make the programme potent. Twice-a-year screenings of the residents of malaria-endemic villages has helped reduce parasite density. These mass screenings have helped pinpoint asymptomatic patients as well as identify cases of malnutrition, which heightens the malaria risk.

The involvement of the community at various stages of the intervention has been a vital factor in its success. Through village meetings and communication material, the tribal communities have been educated about the disease and armed with the

knowhow to deal with it.

Technology has been a cornerstone of the programme. Rapid-diagnosis kits (similar to pregnancy-testing kits) were supplied by government and the Trusts deployed a smartphone-integrated microscope for diagnosis and detection. The results emerging from these efforts have been heartening.

The concerted endeavour in South Odisha has brought desperately needed respite to the tribal communities of the spread (since March 2016, when the programme began, there have been no recorded deaths due to malaria). Progress had been significant but there’s much ground left to be covered.

More investments in surveillance systems and continuous reporting, placing trained human resources in remote geographies, innovating with vector-control methods, and diagnostics and drugs for better treatment and care — all of these are on the agenda to improve the outcomes emerging from the programme. And the Trusts are ready as well. ■

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*By Samod Sarngan*



# Waves of weaves

**Conserving the diversity of handloom weaving in India and preserving the craftsmanship of the artisans keeping it alive is the goal of Antaran, a Tata Trusts programme aimed at rejuvenating a fading tradition. Four weaving clusters — two in Nagaland and one each in Odisha and Assam — have been chosen for the programme based on their distinct handloom weaving styles. When all its pieces are in place, Antaran will work with 3,000 weavers and pre-loom and post-loom service providers over a five-year period.**



A weaver at work in Odisha's Maniabandha village, renowned for its intricate Ikat weaving style





(clockwise from left)  
**'Ikat' from Odisha's**  
 Maniabandha village is  
 still woven on throw-  
 shuttle looms, the way it  
 has been for thousands  
 of years

**'Loin looms', the**  
 preferred style in much  
 of the Northeast,  
 requires high levels of  
 skill and dexterity

**A weaver based in**  
 Assam's Dhemaji district  
 displays her creation: the  
 'mekhela sador', an  
 Assamese dress













(clockwise from far left)  
**A woman artisan in** Maniabandha readies her yarn for dyeing, an elaborate and time-consuming process  
**A worker and her** modest equipment in Maniabandha, where weaving often involves entire families  
**Unlike in other** places, in Assam women handle the entire spectrum of weaving activities, and the sale of fabrics too

# ‘We need to ensure that nutrition has a voice at the table’

“Orphan, invisible, unmeasured and voiceless” — these are the four words Shawn Baker employs to cryptically capture the root causes behind the neglect of nutrition in India and elsewhere. Having said that, the director of nutrition at the Bill and Melinda Gates Foundation (BMGF) is convinced that a sea change is underway in attitudes and outcomes on an issue that is critical to the social and economic development of the country.

Mr Baker, who was previously with Helen Keller International, has made health and nutrition the focus of a 30-year career in the social sector, the majority of it in Africa (Dakar in Senegal is home, he says). Mr Baker speaks to **Christabelle Noronha** about the blight of undernutrition and the urgency of dealing with what he deems “a clear and present danger that is undermining the health of our children, our communities and our nations”.

**India has finally got a proper plan to deal with the nutrition nightmare in its midst. What is the country doing right and what can it do better?**

When I compare the situation in India with that in other countries where I have worked, it has an amazing set of assets. The overall policy framework is strong and aligned with global best practices. There is a tremendous frontline workforce and a rapidly expanding network of self-help groups that can support mothers and families in getting good nutrition.

There are public sector investments of upwards of \$10 billion a year in programmes that are mandated to have nutritional impact. India no longer faces recurrent food shortages. After nearly a decade-long ‘data drought’, there is now almost a deluge of official data (and there’s the soon-to-be-released national micronutrient survey).

The fundamental missing ingredient thus far has been the political will to drive performance across various sectors and efforts that need to be coordinated effectively to produce results. This political will needs to be



informed by smart information systems that focus on the ‘what’ that needs to be delivered and can inform course correction and improvement.

Simply put, health, food and social protection systems need to work in concert to achieve strong nutrition outcomes. India has enormous capacities and investments in these sectors; it now has to work on orchestration and accountability to get them to deliver on their mandate. The National Nutrition Mission provides a level of political prioritisation to nutrition that can lead such orchestration and accountability at every level.

**What does your experience of Africa tell you about the challenges India faces on nutrition? How are these similar to, and how are they different from, the circumstances and outcomes that exist in Africa?**

I often summarise the root causes of the neglect of nutrition in four words: orphan, invisible, unmeasured and voiceless. Orphan because it is seldom clear which part of government is on the hook to deliver nutrition. Invisible because the public image of the problem is the severely emaciated child needing treatment, yet the magnitude of stunting, deficiencies in essential vitamins and minerals, and low birth weight are often not





Shawn Baker, seen here in Burkina Faso, has spent the majority of his career in the social development sector in Africa

visible. Unmeasured because there seldom are robust data systems that assess status, quality of diets and coverage of essential interventions. And voiceless because those most at risk of undernutrition are those who have the least voice in political processes. I would posit that these root causes are universal; they are present in Africa, Asia and the Americas.

There are a lot of misperceptions about progress in Africa, and I have had the privilege of witnessing some dramatic changes. For example, there has been tremendous progress in large-scale food fortification since 2000, with all 15 countries in the Economic Community of West African States adopting common standards for salt, cereal flour and cooking oil.

However, Africa is facing some mega-trends that are deeply challenging. Rapid demographic growth means that, despite some progress in reducing stunting in percentage terms, it is the only region in the world where the absolute number of stunted children is projected to increase. There are growing security concerns in regions that have historically been very peaceful, cutting into government budgets in the social sectors, and

decreasing governments' and partners' abilities to provide services to the most vulnerable. To these I would add rapid urbanisation and the impact of climate change, which undercuts progress in food security.

What encourages me, however, is the political awakening across the continent about the importance of nutrition to achieve Africa's aspirations for economic development. As the president of the African Development Bank, Akin Adesina, says, "Stunted children today are stunted economies tomorrow." He wants governments to invest in "grey matter infrastructure".

**You say that "the fundamental problem with malnutrition is that it's not visible". What does this invisibility mean for the people we choose not to see?**

When you are in a village in Bihar or in Niger and almost every child is stunted, that is just the norm. Parents, village leaders and decision makers don't even see it. If you speak to mothers across Africa and India and ask about their experience during pregnancy, they will almost always talk about feeling weak in terms such as 'lack of blood', what we nutritionists and public health people would call anaemia. But it is so common that it is just assumed to be normal. I was struck by this while visiting maternity wards in Uttar Pradesh and looking at birth registers – almost every birth was recorded at 2.5kg or less. Low birth weight is so common it is normal.

Even when we speak about linkages between undernutrition and under-five mortality, it can be overly nuanced. For example, the statement "undernutrition is the attributable cause of 45% of under-five deaths" isn't clear for all our audiences. Instead, let us say simply: "If these children had been adequately nourished they would be alive today." We have to break this vicious cycle of invisibility and demonstrate to decision makers that malnutrition is a clear and present danger that is undermining the health of our children, our communities and our nations.

Every time we fail to provide adequate nutrition, health and care during the 1,000-day window from conception through two years, we are depriving a child of future potential. More optimistically, if we ensure adequate nutrition, health and care during this critical period, we have locked in potential that is irreversible and set this child up to be more resistant to disease, better equipped to learn, and more able to earn a living.

**Which countries would you say have set global benchmarks in the fight against undernutrition? How did they get their act together?**

There has long been a myth in development circles that only overall economic development can solve malnutrition, particularly stunting. But the evidence shows that there are a number of countries that are performing far better in reducing stunting than their economic development would indicate, among them Brazil, Peru, Nepal and Senegal. Sadly, there are also a number of countries that have far greater stunting rates than you would expect from their economic status.

***"Every time we fail to provide adequate nutrition, health and care during the 1,000-day window from conception through two years, we are depriving a child of future potential."***

**India has “all the ingredients in place” to make progress on nutrition, you have been quoted as saying, but what is it with the country and its sorry speed of execution?**

I have spoken a lot about what I see as the ingredients, or assets, that are in place. I will also give you a few examples of opportunities that are currently being missed. India has made major strides in ensuring skilled attendance at birth, with the latest estimate at over 85%. But one of the essential actions for newborns and mothers is breastfeeding within an hour of birth, and the rate for this is just 42%. That’s an ‘opportunity gap’ of 43%.

There are similar missed opportunities in other sectors and these can be converted into impact. One is empowering *angawadi* (child-care centre) workers to visit all households with pregnant and lactating women and provide just-in-time counselling on maternal nutrition and feeding infants and young children, making sure that all public distribution rations are fortified with essential vitamins and minerals, and providing appropriate nutrition advice through self-help groups.

**What’s the most meaningful contribution that charities, nonprofits and wider civil society can make to help reduce undernutrition?**

I think the single biggest contribution we can make is to ensure that nutrition has a voice at the table – a consistent and long-term voice. Governments have so many competing priorities and these priorities often change with election cycles. Those who suffer the most from malnutrition are the least likely to have a voice at the table.

**Charities and foundations are ever more inclined now to get into direct implementation of social development programmes rather than just routing resources through nonprofits. What are the advantages of this approach?**

I think the big advantage that foundations have over other donors is their flexibility to adapt their approach to what best meets the needs of the context and the moment. We can also take on longer-term and riskier bets that are much more difficult for governments to fund.

**BMGF and the Tata Trusts have collaborated on nutrition and in other social development spheres. How has this gone, and what’s the upside of such institutions joining hands?**

One of the most rewarding parts of my job is the opportunity to learn about the amazing diversity of opportunities and challenges in India. The Tata Trusts have been a huge part of that learning. At the most basic level, when the most trusted name in India and the most visible foundation in the world both say that nutrition is vital, it gets attention. Collaborating with the Tata Trusts is one of our ‘make-or-break’ partnerships to advance nutrition in India, and it is a pleasure and a privilege to work with them.

**“[Foundations] can take on longer-term and riskier bets that are much more difficult for governments to fund.”**





Mr Baker and associates at a village child-care centre in Uttar Pradesh, a state in dire need of help to minimise undernutrition

**You were a US Peace Corps volunteer in Zaire in your youth. Was that the beginning of your affinity with Africa? How has the continent changed in the long years since?**

I should probably reveal that I am actually a repurposed marine biologist, which is what I studied for as an undergraduate at university. I had a hankering to serve as a Peace Corps Volunteer and I thought it would be a two-year hiatus on my way to becoming the next Jacques Cousteau.

Because of a youthful act of rebellion I had forced my middle school to provide a French language instructor. When I applied for the Peace Corps that vestigial knowledge of French got me posted in a Francophone country, teaching biology and chemistry to school students. During the summer recess, I worked with the district hospital and local missionaries to set up what were then called ‘well baby clinics’.

That was my pathway to falling in love with nutrition and to falling in love with Africa. My children are all from Burkina Faso and this makes global nutrition deeply personal for me. I see every day how much of a difference good nutrition and care makes in their lives, and I wish all children could have these same basic entitlements.

**Beyond social development, what sort of pursuits do you favour? Is it easy to find the time for these?**

I am an obsessive reader, I love watching birds, am an opera fanatic and also love to run. You have picked up on the biggest challenge, which is finding time for these pursuits. Reading is probably the easiest because the amount of time I spend on airplanes and in airports fits well with my most inseparable companion, my Kindle, which is always fully loaded. ■

# Animal spirits need nurturing

The call from India's wild is loud and clear: greater effort and awareness are needed to protect — and celebrate — the wonderful creatures in our midst

India is among the top 17 mega-diverse countries of the world. It is home to about 8% of the world's recorded species, from apex predators such as lions, tigers, leopards and brown bears to large herbivores such as elephants and rhinos. This rich fauna has not just been an integral part of India's environmental history, but has also been instrumental in shaping several indigenous cultures and traditions. However, over decades, this intimate connection with nature has eroded rapidly.

By the 1990s, a crisis was looming in India and it slowly became clear that this catastrophically large-scale loss of forests and natural habitat was happening right at our doorstep. Thoughtless replacement of forests with the concrete jungle near our urban centres meant the wildlife there had no place to go but into homes of people and their farms.

By 1995, we were being called in to rescue and rehabilitate jackals, monitor lizards, snakes and civets that were appearing in residential colonies all over fast-developing Delhi. Alongside a rapid-response unit was the larger idea of creating awareness and waking people up to appreciate the enormous adaptability and tenacity of wildlife to still carry on.

Sadly, more than 25 years later, the inevitable truth remains that our cities will continue to expand and the animals displaced will be forced to come into

human-habited spaces as they look for food and water. That's what led us to a sight that was truly upsetting: the magnificent sloth bear, that shy denizen of the deep forest, being dragged along hot highways and polluted city streets to entertain tourists.

That sight made us embark on an 18-month long study, during which we had to search through the secret shanties and settlements in which the nomadic Kalandar community lived to investigate where they got the bears from, how they were 'trained' and managed. Everything we saw made us realise we had to work fast to avert a conservation disaster.

## An unbearable dance

The Kalandar community's time-honoured practice to 'create a dancing bear' began with the driving of a red-hot poker through the muzzle of the six-month-old bear cub. A thick coarse rope was then thrust through the piercing. Tug on this rope and the bear will jump up and down in pain. That provides the appearance of 'dancing'.

The torture does not end there. The cubs' teeth are smashed with a metal rod and the male cubs castrated crudely with a blade. If the animal survived the trauma and pain, it got to live at the end of a four-foot rope for life, malnourished, weak and psychologically disturbed. The bears were seen merely as a commercial commodity by the Kalandars, who also made amulets with their teeth, hair and claws.



**Kartick Satyanarayan** is the cofounder and chief executive of Wildlife SOS, a conservation nonprofit established in 1995 in India that works to protect wildlife in partnership with indigenous communities



Kartick Satyanarayan with rescued elephants at the Elephant Conservation and Care Center in Mathura

We visited and camped in more than 70 Kalandar settlements. Our distress at seeing the tortured animals could not hide our shock at the marginalised lives of the Kalandars, with no drinking water, no toilets and a complete absence of education and healthcare. Not only did the bears need our help, but so did the people who were making them dance for a living.

The Kalandars had kept dancing bears for 400 years and it was the only way they knew how to support their families. We knew that in order to rescue these bears — ultimately, preventing the poaching of cubs to protect them in the wild — the Kalandars would have to be put at the heart of the solution. And that's exactly what we did.

Our Kalandar rehabilitation programme provided seed funds and guidance to help the men start their own businesses, skills training to empower women and education for their children. We also helped the community get access

to basic amenities. It was critical to gain their trust and make them believe that a different future existed for them and that they should surrender their bears instead of running from the law.

Since the inception of the programme in 1995, the Kalandars have surrendered a total of 628 bears that were later rehabilitated at our four sloth bear rescue facilities across India. Today these bears receive round-the-clock veterinary care and lead peaceful lives, digging for termites, climbing trees, soaking in ponds and playing with other bears.

The Kalandar rehabilitation initiative required persistence and long-term vision, and that's how it goes with most conservation challenges. Currently one of the biggest conservation problems confronting India is human-wildlife conflict. Our forest cover is on the decline and so is the tolerance that people have for animals.

This is perfectly encapsulated by the



plight of India's elephants. Given that they enjoy a special place in the country's culture and tradition, one could suppose that our elephants enjoy a high degree of protection. Unfortunately, the situation on the ground paints an entirely different picture.

Just 22,000 to 25,000 wild elephants remain in India's jungles. Those are meagre numbers compared with the million wild elephants in the country about a century back. Despite the nosedive in their population, India is home to nearly 60% of the world's Asian elephants, making it the last stronghold of a species that faces a

range of threats, among them shrinkage of forest area, habitat destruction, poaching and captivity.

We started working with elephants in 2009, the aim being to help save what's left of them in the country. Our initial efforts were directed at rescuing and rehabilitating elephants facing severe cruelty at the hands of their illegal captors. The captivity of elephants is a blight that is often overlooked. Elephant calves are poached from their herds and then brutally trained to be used for exploitative commercial activities like tourist rides, circuses, wedding processions and temple events.

### **The brutality of 'taming'**

Lack of information about what goes on behind the scenes while 'taming' an elephant has contributed to incentivising the capture of young calves from the wild. Most tourists are unaware of the brutality that a 'trained' elephant faces. This begins right from the moment it is snatched from the protection of its mother, following which the calf is kept in a tight-squeeze trap, where it is starved and beaten for weeks. Merciless assaults remain a daily routine until the calf's wild spirit is broken and it becomes totally submissive.

The Animal Welfare Board of India published a shocking report in 2018 about the dire conditions of elephants forced to give tourist rides at Amer Fort in Jaipur, Rajasthan. Most elephants were found to be lame, blind and needing urgent medical attention. We must think about ways to save these magnificent animals (to know more please visit [www.refusetoride.org](http://www.refusetoride.org)).

As our physical world changes rapidly, it is important to nurture our relationship with the animals in our midst. A healthy, thriving biodiversity is important to the survival of India and the world. The time to act is now. ■



A rescued sloth bear at the Bannerghatta Bear Rescue Center, a sanctuary for rescued 'dancing bears' in Karnataka



