The Tata Water Mission is changing lives in 4,000 villages across India.

**IN FULL FLOW**

**INTERVIEW**
MS Swaminathan’s hopes for India are ‘very bright’

**SOCIAL BALM**
Making Maharashtra’s prisons a more humane place
The Tata Water Mission is one of the biggest and among the most impactful of the efforts undertaken by the Tata Trusts to enhance India’s social development quotient — and with good reason. The Mission’s programmes in water, sanitation and hygiene have been designed to help address the wide range of challenges that the country faces in a sphere of critical and immediate importance.

Our cover feature centres on the Mission’s role as facilitator and implementer in a collaborative endeavour that involves India’s union and state governments, philanthropic organisations and nonprofits. The scope and spread of the Mission’s work — which covers more than 3.5 million people across 12 states — is testimony to the commitment of the Trusts to a cause that touches every Indian citizen in one way or another.

Also on the menu in the second edition of Horizons are stories of hope and aspiration that shine a light on the Tata Trusts’ pan-India mandate of improving the quality of life of marginalised communities. From Bengaluru, we bring you an article on how the Foundation for Innovation and Social Entrepreneurship, a Trusts initiative, is backing development-focused businesses.

In Andhra Pradesh, a pilot project shows how India’s leaky fertiliser subsidy programme is getting a tech-enabled upgrade. In Punjab, a simple technology that converts crop stubble into fertiliser is reducing air pollution in North India. In Odisha, urban slum dwellers are being given land rights through eye-in-the-sky mapping done by drones. And in Maharashtra, there’s the social transformation project that is benefitting 2,500 villages and an initiative to make the state’s prisons a more humane place.

This issue, in addition, features interviews with the legendary Dr MS Swaminathan, Odisha Chief Minister Naveen Patnaik, Food Safety and Standards Authority of India chief executive Pawan Agarwal and with Parameswaran Iyer, the warrior at the vanguard of the country’s big and bold push on water and sanitation. Not least, we have a first-person perspective on developing leadership for the social sector by Ashish Dhawan, founder and chairman of Central Square Foundation.

The Tata Trusts are lending a hand in building a positive and progressive India. Our intent at Horizons is to highlight how they are doing this.

Cheers.

Christabelle Naranska

We hope you will help us make Horizons better with your valuable feedback. Please do write to us at horizons@tatatrusts.org.
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Tata Trusts
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India

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Cancer care centre to come up in Tirupati

The Tata Trusts and the Tirumala Tirupati Devasthanams (TTD) held a groundbreaking ceremony on 31 August, 2018, for the construction of a 300-bed cancer care facility in Tirupati.

The groundbreaking ceremony for the centre, to be called the Sri Venkateswara Institute of Cancer Care and Advanced Research, happened in the presence of several dignitaries, among them N Chandra-babu Naidu, the chief minister of Andhra Pradesh, and Ratan Tata, the chairman of the Tata Trusts.

Following up on an agreement signed with TTD last year, the Trusts have set up a special purpose vehicle — the Alamelu Charitable Foundation — to implement this initiative. The objective is to ensure affordable, accessible and high-quality cancer treatment and screening.

The cancer care centre is slated to become operational in June 2019 and will be equipped with modern technological systems and will offer a range of services, including reconstructive support, palliative care and rehabilitation.

The centre will provide accommodation for patients and their caregivers in order to reduce the expenses of those travelling from afar.

The Tata Trusts have been working to set up a comprehensive cancer care network in India by collaborating with various state governments. Recently, the Trusts partnered the Government of Assam to operationalise 19 upcoming cancer care centres in the state.

Health project with tech focus

The Indian government’s Ministry of Health and Family Welfare has joined hands with the Tata Trusts and Dell to develop a technology platform for the nationwide prevention, control, screening and management of non-communicable diseases (NCD).

The NCD programme will cover people over the age of 30 years and is one of the modules in the central government’s primary healthcare initiative.

Cancer project in Nagaland

The Nagaland government and the Tata Trusts have come together to implement a project that aims to provide comprehensive cancer care in the state.

The collaboration will build on Nagaland’s public healthcare system to make cancer care accessible and affordable. A joint entity, the Nagaland Cancer Care Foundation, will implement the programme.

In addition to developing the Naga Hospital Authority in Kohima, the model envisages building capabilities at the district hospitals in Mon, Mokokchung, Phek and Tuensang by equipping them to offer confirmatory diagnostics and follow-up treatment.

The latest medical equipment will be installed to ensure that treatment can be provided in adherence with globally accepted standards, supported by awareness, screening and early detection programmes.
Multi-activity centre for the elderly in Bhubaneswar

Odisha’s first state-supported multi-activity centre for senior citizens – ‘Anand’ – opened at Nayapalli in Bhubaneswar in September 2018. The centre has been developed by the Social Security and Empowerment of Persons with Disabilities Department, Government of Odisha, in consultation with the Tata Trusts, and has been implemented by the non-profit HelpAge India.

The objective of the centre is to address the needs of the elderly by developing a model of active engagement and awareness about health and wellness.

It will facilitate happy ageing through recreational and learning activities and by providing a platform for socialisation. The facility will also organise medical camps and provide counselling and medical support. The activities include entertainment, games, cultural evenings, yoga and physiotherapy.

Badminton gets grassroots boost and more in Mizoram

The Tata Trusts have launched a three-tier badminton training initiative in Mizoram in partnership with the Pullela Gopichand Badminton Foundation, the Mizoram Badminton Association and the Mizoram State Sports Council.

Under this initiative, 40 grassroots centres, six regional development centres and an apex training facility will be set up to develop badminton talent from across the state.

Launched by India’s chief national badminton coach, Pullela Gopichand, the three-tiered initiative will be implemented by the Trusts through its North East Initiative Development Agency.

At the base of the pyramid-structured programme is the grassroots centre, which aims to increase participation in the sport by reaching out to children in the 8-14 age group.

The grassroots programme, spread over all eight districts of Mizoram, will be targeting 1,600 children over three years. Since May, some 25 centres have become functional and about 800 players have been enrolled.

Fluoride-free water on the purification agenda

The Tata Trusts and the Clinton Health Access Initiative (CHAI) have collaborated on the Jeewan Jal project to ensure access to purified water in the Dhar district of Madhya Pradesh. As part of the project, a water purification plant has been set up to provide fluoride-free water to the local community.

The Jal Jeewan project will provide safe drinking water to 11 villages in five regions across the district. The project will reach out to 313 beneficiary households, 15 child-care centres and 14 schools in the district. The water purification unit has a capacity of 6,000 litres per day.
The Tata Water Mission has taken the collaborative route to reach the most precious of resources to people and communities in dire need.

A regular supply of water is the big reason for the ready smile and positive attitude with which Devibai Grasiya greets visitors to her modest dwelling in Gharat, a village in Rajasthan’s Sirohi district. “I’m happy with what has happened in my hamlet,” says the 55-year-old tribal as she settles down to explaining the difference a tap at her doorstep has made to the everyday lives of her family.

“Till about a year back, I would spend three hours every morning fetching water,” says Ms Devibai, who had to depend on two erratic sources for the elixir: a hand pump about a kilometre away from her home and, when that ran dry — which it frequently did — a distant well. “There were constant fights over water and we barely had enough for a weekly bath. I had to send my kids to school unwashed and the schoolteacher was constantly asking them why they were so dirty. It upset me no end.”

The drudgery and distress of those days have been pushed into the past ever since Ms Devibai and others in her village became part of the Tata Water Mission (TWM), an inclusive, comprehensive and extensive programme that has covered in excess of 3.5 million people spread over 4,000 villages in 12 states across India.

Women are at the heart of this initiative, a fact Ms Devibai is keen to highlight. “When the water scheme was mooted, the women of the village were the most enthusiastic about it, simply because we were the ones bearing the burden. We got together and pressed for it to be implemented.”

The word ‘mission’ is an appropriate descriptor of what TWM truly represents, in execution as much as ambition: an idea to help craft a healthier future for India by providing underserved communities with easy access to clean drinking water, by improving sanitation practices and by promoting better hygiene.

Collaboration is the essential ingredient in the approach of the Mission, which blends water schemes and projects in close association with the central and state governments, philanthropic foundations and an array of nonprofit organisations.

The Mission is a leap of faith for the Tata Trusts and a potent example of what can be done to alter the alarming narrative on India’s wretched water woes (see graphic on page 10). There is no debating the absolute need for immediate, even radical, answers to the country’s water crisis.

Mission possible and more

TWM reaches...

...more than 3.5 million people

...in about 4,000 villages
For Mavabai Grasiya, a 25-year-old who is pregnant, this newly fitted tap outside her home in the Sabela village of Rajasthan’s Sirohi district has been a boon.

The partners
- The Indian government
- State governments
- Charities and foundations
- Nonprofit organisations
- Village communities

The agenda
- Delivering access to safe drinking water
- Assuring supply and protecting water sources
- Enabling sustainable sanitation facilities and services
- Driving behavioural change for better hygiene

The approach
- Building and enabling community-centred institutions
- Promoting the use of innovative technology solutions
- Ensuring economic viability and sustainability
- Improving water quality and availability
- Crafting an inclusive social development process

...in 12 Indian states
- Andhra Pradesh
- Assam
- Gujarat
- Jharkhand
- Karnataka
- Maharashtra
- Nagaland
- Odisha
- Rajasthan
- Telangana
- Uttarakhand
- West Bengal
India’s water woes

India is suffering “the worst water crisis in its history”, according to NITI Aayog, the Indian government’s policy think tank. And the numbers are scary...

The complication lies in finding a suitable mix of means and methods to accelerate the pace of change.

The effort to seek out dynamic solutions in water, sanitation and hygiene (or WaSH) was what led the Trusts to setting up TWM in 2014. The intent of the Trusts, right from the beginning, was to get involved directly in implementation, with ears to the ground and feet on the move. Being a passive supporter has its merits but not for a programme such as this, where scale and depth are critical.

The shift in perspective was a necessity given India’s dire scenario on water. “Our focus previously was on investing in infrastructure for the community, but gradually we realised the limitations on that front,” explains Divyang Waghela, who heads TWM. “With the Mission we are playing the role of facilitator while helping create an ecosystem where multiple stakeholders — most crucially the government — can come together and run in a common direction.”

Government is the key

Mr Waghela points to the capital-intensive nature of programmes in the WaSH sphere to underscore the importance of having the government as torchbearer as well as principal participant. “We work closely at the central and state levels to try and utilise mainstream resources for interventions at scale.”

The use of technology to address, in particular, issues of water quality and contamination — rampant all over India — and behavioural change communication are two other aspects of the Mission’s work.

Community mobilisation is central to what TWM has been able to accomplish. That’s where the Mission’s endeavour starts and that’s how it is sustained. The sequence in every WaSH programme’s unfolding is the same, no matter the composition of a target area or its challenges: the influencers among the village women are indentified and motivated, water committees are formed and plans frozen, money for infrastructure and other
expenses is collected, and then the implementation kicks in. The pattern on outcomes follows a similar trajectory: piped water at the doorstep, a properly built latrine, and an education on the health benefits of hygiene.

Convincing villagers to contribute money for infrastructure cost — 10% is the standard for a household — is a surmountable issue when it comes to ensuring a steady, clean and nearby source of water. With sanitation, the storyline has to accommodate twists and turns (see Dawn of a clean era on page 15). Any number of reasons have been advanced for India’s lacklustre performance in the building and use of toilets, from lack of resources, policy failures and illiteracy to culture, religion, social norms, even the effects of colonial rule. The behavioural change component in TWM is aimed at hurdling over such barriers.

‘Clean’ revolution

“The day every one of us gets a toilet to use, I shall know that our country has reached the pinnacle of progress,” said Jawaharlal Nehru, India’s first prime minister. The Narendra Modi government has stretched its sinews to translate that sentiment into reality through the remarkable Swachh Bharat Mission (SBM). Launched in 2014, the Mission’s goal is to end open defecation in India by 2019 and it has unprecedented political backing and splendid support from the private sector and civil society. It is estimated that upwards of $25 billion (about ₹1.8 trillion) has been spent on making the Mission a success and, as of October 2018, nearly 87 million toilets have been constructed under the initiative.

Building a toilet is one thing, getting people to use it quite another. The changing of mindsets becomes vital in the context and TWM has concentrated on this facet in its operational zones and elsewhere, too, notably through the Zila Swachh Bharat Prerak programme, a pan-India effort that provides young professionals the opportunity to spur social development in rural India. The 500-odd preraks (or motivators) in the project are sanitation warriors, as TWM terms them, and they work with district administrations in the design, implementation and monitoring of SBM interventions.

For Kanchanbai Solanki, a 47-year-old mother of two who lives in Old Kotda village of Junagadh district in Gujarat, awareness gained from the behavioural change campaigns conducted by TWM has gone beyond water and sanitation, and so has she. “I hardly stepped out of my house before I became associated with this project,” she says. “I joined the water committee, then the local women’s federation, and I got the chance to go to Delhi to collect an award [after Old Kotda finished second in a competition to select model villages].”

Gujarat has been an unalloyed
Stories from a new world of water

Kanchanbai Solanki, 47 years, Old Kotda village, Junagadh district, Gujarat

We didn’t have any drinking water in our village before the water project reached us. It used to take me three hours a day to bring water to my house and that left me with no time for myself or my children. I guess I just got used to it.

Initially the women in the village were very reluctant and very sceptical about joining the proposed water scheme. I was educated so I understood what they were saying and I explained to the others that it sounded good and that we should do it. The benefits were so obvious, especially for us women.

We formed a water committee and I was part of it. That’s when I began being exposed to the world outside my home. It was liberating. I began teaching at the village anganwadi (child-care centre) and I joined the district women’s federation.

Best of all, I completed my graduation [BA arts] three years back. I gave the exams along with my son and I was the oldest person in the hall. I would always finish answering my papers before the girls in the room. My son got 75% and I got 73%.

I was invited once to give a guest lecture to a bunch of about 50 fellowship students. Obviously, I had never done anything like it and I was nervous. But I pulled it off and I got several questions from the audience. There was another woman who spoke and she did not get a single one.

I enjoy working for the village. I wouldn’t mind joining politics, maybe become the sarpanch [head of the local self-government body]. Why not?

Rengibai Grasiya, 38 years, Kundal village, Sirohi district, Rajasthan

Getting water was always women’s work. In my family it’s me or my girls who did it; never my boys or my husband. I would go three-four times a day to fetch water from faraway wells and it took two-three hours. It was a backbreaking task but there were no options.

Previously, we had a few hand pumps in our village but you had to wake up early in the morning to secure your share. Be late and the water would slow down to a trickle. There were always too many people at the pumps, there were constant quarrels and the situation worsened in the summer months.

When the Tata Water Mission people first came here, the villagers used to say these are outsiders, that they would take our money and disappear. But slowly we were convinced. Putting up ₹3,000 of our money was tough, but the benefits were so obvious. We would get water at our doorstep and that was a big, big thing.

The toilets were a different matter. Going out at night to the fields is dangerous around here; there are snakes around and even otherwise it’s not always safe for women. You had to go with someone else; never alone. We had to go before sunrise or after sundown. Sleep was a luxury.

Water at the doorstep of our house has been a boon in every which way. I used to take a bath once or twice a week; now I can bathe twice a day. My children don’t fall sick as frequently and I have some spare time for myself. I cannot imagine how I managed in days gone by.

Kanchanbai Solanki, 47 years, Old Kotda village, Junagadh district, Gujarat

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I enjoy working for the village. I wouldn’t mind joining politics, maybe become the sarpanch [head of the local self-government body]. Why not?
success for TWM. Operating through the Coastal Salinity Prevention Cell, a partnership with the Aga Khan Rural Support Programme (AKRSP) and the Ambuja Cement Foundation, the Mission has reached more than 450 villages. It has tapped into government schemes and connected well with village bodies and the Water and Sanitation Management Organisation, a state institution working for community welfare.

**Awareness first**

“We conducted a lot of awareness programmes — street plays, video shows, village meetings and the like — we built capacity in the community and made them capable of implementing, managing and sustaining their WaSH projects independently,” says Ketan Hingu, a programme manager with the Mission. The challenges have been plenty, though. “Getting the community to contribute money was not easy. The question we kept getting asked was: ‘Why do we have to pay for something as basic as water? Isn’t that the government’s responsibility?’ Our answer was that the community had to take ownership. The women of the villages came around to our point of view and took the lead.”

The WaSH ride has been rougher for the Mission in Rajasthan, where tribal communities comprise the majority of beneficiaries. “Initially there was a lack of belief in our people and in our organisation,” says Pankaj Papnoi, who oversees the programme in the state. “The most difficult part was getting the community to put up their 10% share of the cost. We persevered and it has paid off; reluctance has given way to acceptance. Making them understand that they are the owners of the system has been the key.”

The time Mr Papnoi and his team have spent on community mobilisation has been worth it for the Mission in Rajasthan, where interventions cover about 70,000 people in 250 villages through the Centre for microFinance, an associate organisation of the Tata Trusts. “In my experience, it’s easier to work in tribal regions,” says Mr Papnoi. “Once the community’s suspicions disappeared, we were able to swing the balance.”

TWM invested in technology for the sanitation part and in mason training to construct toilets. Most importantly, it devoted attention to driving home the WaSH message in a novel manner. “Social art” was the chosen medium of communication and it proved a huge hit with the target audience. Folk forms of theatre and music were combined to mount night shows that attracted crowds of up to 3,500 enthralled villagers. Staged by professional artists and performers, these thematic shows were part entertainment, part education and they focused on sanitation and hygiene.

The inspiration for the social art tack came from One Drop, the

“**We are playing the role of facilitator while helping create an ecosystem where multiple stakeholders — most crucially the government — can come together...**”

Divyang Waghela, head, Tata Water Mission

Phoolaram Khumaji of Jhadoli village in the Sirohi district of Rajasthan has benefitted from a rooftop rainwater harvesting scheme implemented under the Mission
Canadian charity that partners TWM in Rajasthan. One Drop was established by Guy Laliberté, the co-founder of Cirque du Soleil circus, famous all over the world for its flamboyant and cinematic productions. “One Drop pioneered the ‘social art for behaviour change’ approach,” says Marie-Anne Tawil, the charity’s chief executive. “Cirque du Soleil engages the audience in a story with imagery, songs, dance — and very few words. It is the main source of this approach, which integrates a systematic and evidence-based process that takes into consideration the community’s cultural and artistic references to create social art interventions.”

Collaborations of the kind with One Drop are the backbone of TWM’s multi-pronged methodology, and it takes loads of effort to calibrate them to everybody’s advantage. “It has been very difficult to craft a long-term partnership like this,” says Apoorva Oza, who heads AKRSP. “You have to curate such institutional relationships because in a partnership many things can go wrong. Our tie-up with the Trusts is growing and doing well. What I appreciate is the space and respect the Trusts have given to its partners. That calls for humility and mutual respect.”

**Uniting to thrive**
Mr Oza emphasises the need to concentrate on the transformational rather than the transactional in the social development space. “There is too much money going for transactional work,” he says. “We have to somehow get the state and corporate entities to invest in transformational processes. We need to be ambitious and partnerships allow us to do that. There is so much to do in a village and, on your own, you can know only a few things, not everything. You can have resources for only four things, not 40. There is no choice but to collaborate.”

Coming together, in the circumstances, is an imperative, not an option, and Mr Waghela understands that. “We see ourselves as the pivot for such a joining of hands; it’s critical to achieve scale,” he says. “But the biggest challenge is sustainability, in institutions, finances and systems.”

The 150-member team behind TWM has a 2020 deadline to achieve its objectives, and an ever-expanding list of tasks to complete by then. There’s water security, waste management, menstrual hygiene, technology solutions to tackle water contamination, linking water to themes such as livelihoods, education and health, policy advocacy, and more.

Every human society has been shaped by its relationship with water, a resource that is becoming more precious with every passing day. TWM, which expects to touch the lives of 6 million people in 7,000 Indian villages over the next two years, will have a role to execute in protecting this resource and in making it available to those who need it most.

By Philip Chacko

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Easy access to clean water has brightened up the lives of these kids from Kundal village in Rajasthan’s Sirohi district.
Yadgir in Karnataka is one of the most backward regions in India. The river Bhima flows through the area but Yadgir suffers from frequent droughts and water scarcity. Whether it is health, education, sanitation or livelihoods, Yadgir has been a poor performer. In April 2018, the district was ranked as the 40th most backward district in India and was included in Prime Minister Narendra Modi’s ‘transformation of aspirational districts’ initiative, which covers the 100 most backward districts in the country.

At first sight, Yadgir is an unlikely candidate for achieving any sort of developmental milestone. And yet this laggard is being transformed into a sanitation showcase as a result of the Tata Water Mission’s work in facilitating the government’s Swachh Bharat Mission (SBM) over the last couple of years.

The Tata Trusts have been active in Yadgir for a number of years, having set up an associate organisation called Kalike Samruddhi Upakram in 2009. The aim was to pilot and scale up innovative solutions to local problems, through integrated programmes relating to livelihood
Coming of age

For adolescent girls in Yadgir district, life can be tough, especially since their mothers migrate to cities along with their fathers looking for temporary work. The girls are often left in the care of their grandparents and other relatives. And they are desperately in need of advice and guidance.

Kalike, a part of the Tata Trusts, along with technical support from the NGO Sukhibhava, has started organising awareness programmes in about 70 villages in Yadgir.

“We started work in June and plan to cover five schools and about 250 adolescent girl students every month,” says Pragna Shekhar, who is closely associated with the initiative. “We target adolescent students in the 12-18 age group.”

The stigma associated with the sensitive topic of menstruation, Ms Shekhar says, makes it difficult to get the students involved. “They are very shy and do not open up.”

The menstrual hygiene management programme focuses on four aspects: awareness, accessibility, affordability and disposability. For two hours every week, the girls are made aware about these aspects and are encouraged to ask questions. “We empower them through awareness and also ensure improved access to healthy menstrual practices,” adds Ms Shekhar.

The state government provides free sanitary napkins to the girls. “We have to teach them how to safely dispose the napkin and not throw it into the gutter or burn it,” says Ms Shekhar.

A supply chain has been established and the students can buy products — including cloth padding that are washable and reusable and can be dried at home — through their teacher-coordinators who access it from suppliers selling it at subsidised prices.

In some ways, the Kalike team acts as life coaches. The Kalike coordinators encourage the girls to at least complete their high school education and think of marriage only after they turn 18.
enhancement, health and nutrition, and skill development.

About three years ago, Kalike initiated its ‘Mission 2020’ venture to transform Yadgir. “The seeds of this initiative are based on the human development report that we created for the government, where we looked at health, education and livelihood parameters,” explains D Shivakumar, the executive director of Kalike.

Kalike’s study showed that the district had little or no access to drinking water and sanitation facilities, hence one of its key initiatives is water, sanitation and hygiene (WaSH). In 2015, less than 11% of Yadgir’s houses had toilets. Things started looking up when the Indian government launched SBM. The power of unity

Today Yadgir is witnessing a dramatic transformation. The district has already achieved 80% coverage and is looking to be declared open defecation free (ODF) very soon. “We are confident that all 466 villages in the district will soon be covered,” says Prashanth HL, the SBM manager in Yadgir. “The Tata Trusts and their representatives have helped us a lot with implementation.”

The role played by the Trusts and Kalike has been to make sanitary practices sustainable by bringing about changes in living habits. “SBM provides for the leveraging of resources to construct toilets, with the government bearing almost the full cost,” explains Mr Shivakumar, “but we realised that it is very important to bring about behavioural changes among the people in the villages.”

Kalike drove the community-led total sanitation programme, which helped Yadgir achieve a greater coverage of toilets. Here’s an example of the community interactions. Early morning before the sun rose, and armed with torches, Kalike volunteers (both women and men), along with a few members of the local village panchayat, would accost villagers heading out to the fields, offer them roses and urge them to use toilets. “We would tell them to build toilets near their homes,” says Rohini Kalashetti, senior programme coordinator with the WaSH initiative. Another aspect of SBM is hygienic menstrual practices and Kalike works to improve that parameter as well (see Coming of age on page 16).

The Trusts also sent trained people to the villages, where they coordinated with the gram panchayats, encouraged the villagers to apply for government incentives, and helped them with the documentation for building toilets under SBM. Mr Prashanth acknowledges the huge

Yadgir’s happy voices

“Yadgir will soon become ODF as the volunteers have done very well in all the villages.” — Mahesh Kumar, prerak, Swachh Bharat Mission, Yadgir

“Going out in the morning was always a problem for women. With the toilets having been built, we find it a huge relief. And we clean the toilets every day.” — Anuradha, villager

“Most women in our village are now using toilets. In fact, my daughter refuses to go out into the fields now. All the schools have toilets and provide drinking water for the students.” — Mallikarjun Patil, a member of the gram panchayat in Nandeppalli village

“I am ageing and find it difficult to go out into the fields for defecation. There are eight people in our home and all of us now use the toilet. It is very good that the government is encouraging us to use toilets; we would never have done it on our own.” — Manikappa, villager

“We ensure that all students wash their hands before having lunch. We also teach the younger ones on cleanliness, cutting their nails and using toilets.” — Ashwini, eighth standard student and part of a team that monitors other students
role played by the Trusts in convincing villagers to stop using open spaces as toilets and build units attached to their homes.

**Toilets for all**

Today there are more than 100,000 toilets constructed and being used in Yadgir. Mr Shivakumar points out that the WaSH initiative has been a success at schools and within the rural community. While the facilities — functional toilets, water filters, basins for handwashing, etc. — are in place, the softer aspects (which includes educating children and villagers on how to use and maintain the toilets) are also progressing rapidly.

The sanitation movement does not work without water. Though located in a rain-deficient region, Yadgir has more than 250 tanks built over time, but most of them are dry. For the Trusts and Kalike, water conservation is a major issue. Their workers interact with the villagers and farmers in finding ways to conserve and use ground water.

Kalike’s objective is the holistic development of Yadgir. To that end, it also focuses on livelihoods — making agriculture sustainable by encouraging farmers to diversify into different crops, helping youth through skill development, and opening up new areas in horticulture, solar energy, and more. Kalike has about 120 people working in Yadgir’s villages.

With dramatic changes occurring in their daily lives, on WaSH, healthcare and livelihoods, Yadgir’s residents are hoping to see their district drop out of the backward list and, instead, be recognised for what it is — an uplifting story in India’s social development journey.

By Nithin Rao
‘Swachhata is everyone’s business’

Parameswaran Iyer has made a name for himself in the water and sanitation sector in different parts of the world. His most sterling accomplishment, though, has been in his home country, where he heads the gargantuan Swachh Bharat Mission (SBM), the largest sanitation initiative ever undertaken globally.

The 56-year-old Mr Iyer retired from the Indian Administrative Service to join the World Bank in Washington and worked with the organisation in Vietnam, China, Egypt and Lebanon. Now, as secretary in the central government’s Ministry of Drinking Water and Sanitation, Mr Iyer is at the vanguard of the extraordinary effort to make India open defecation free (ODF). He speaks here to Horizons about SBM and what it represents. Excerpts from the interview:

**You have been heading the SBM initiative for two-and-a-half years. What has the experience been like?**

The Mission is the world’s largest behaviour change programme and it has been transformed into a massive *jan andolan* (people’s movement), covering
This programme has become possible because of our Prime Minister Narendra Modi’s unprecedented move to put sanitation at the forefront of the development agenda. Working with an incredible team in the ministry and with state governments at every level, all the way down to the grassroots, has been a tremendous experience.

**Nowhere in the world has a programme like SBM been attempted. What have you and your team learned along the way?**

One of the key differences between SBM and the previous sanitation programmes rolled out in India has been the personal championing of the cause by the prime minister. With his backing, the programme was conceptualised on the primary pillars of the ‘community approach to sanitation’. The strategy has focused on the four ‘Ss’:

- **Scale** — to change the behaviour of 600 million people who were used to defecating in the open.
- **Speed** — with a sunset clause of October 2019 defined in order to build a sense of urgency.
- **Stigmas** — to change habits and beliefs held for generations.
- **Sustainability** — to ensure that people do not slip back into their old habits of open defecation.

**Will the mission meet its October 2019 deadline to make India free of open defecation? How tough a target is that, even with all the pieces in place?**

SBM is well on track to achieve an ODF India before its deadline of October 2019. In parallel, our ministry maintains its focus on sustaining the progress already made on the ground and maintaining the quality of work being done.

The link between access to water and sanitation has been obvious and the government has made policy changes to secure both.

**What has been the on-ground effect of these changed policies?**

A policy decision has been taken under the National Rural Drinking Water Programme (NRDWP) to prioritise the provision of piped water supply (PWS) for ODF villages. In the 500,000-plus such ODF villages, 616,000 habitations have PWS through public stand-posts. The remaining are being covered on priority.

About 80% of all habitations in India are ‘fully covered’, in that they receive at least 40 litres of drinking water per capita every day. About 55% of the rural population has access to PWS and about 17% of households through private connections. Additionally, the central government is now working on a strategy to provide piped water to all households in a fixed time span, well before the ‘sustainable development goals’ timeline of 2030.
The Swajal model being promoted by NRDWP is a demand-driven, community-centred drinking water programme that will be implemented in all ‘aspirational’ districts (those categorised as backward) on priority.

On sanitation and the construction of toilets, the emphasis has shifted from number of units built to behavioural change and sustainability. What sort of difference has this outcomes-over-output approach made?

From the outset, the Mission has been a behaviour change programme, creating demand for safe sanitation and meeting it with the required provisions. What works with such a programme is that even though the output of a demand- or a supply-driven programme is the construction of toilets, in the demand-driven approach the outcome is the sustained habit of using toilets and the adoption of safe sanitation practices.

This has been confirmed by the National Annual Rural Sanitation Survey 2018 — conducted by an independent verification agency under a World Bank support project — which found that 93.4% of households in rural India that have access to a toilet actually use it.

You have been an advocate of the GOBARdhan project, which seeks to generate wealth and energy from waste. What’s the potential here and how important can this become?

SBM (Gramin) comprises two main components for creating clean villages: creating ODF villages and managing solid and liquid waste in villages. With the GOBARdhan scheme, the goal is to positively impact village cleanliness and generate wealth and energy from cattle and organic waste. The scheme also aims to create new rural livelihood opportunities and enhance the incomes of rural people; this plays to an important theme of the overall development agenda. The importance of the scheme is also highlighted in the 3 ‘Es’ it seeks to promote: energy, empowerment and employment.

Having the prime minister as its leading well-wisher and supporter has been a boon to the Mission, but what about the foot soldiers in this people’s movement?

To ensure change at such scale, as is being done by the Mission, one requires leadership from the very top as well as ground-level activation. At the central government level, behaviour change communication is undertaken through mass media campaigns such as *darwaza band* (or close the door), starring Amitabh Bachchan and Anushka Sharma, which communicate the message of usage of toilets by all.

The SBM foot soldiers — the *swachhagrahis* — participate in the triggering of behaviour change in the community and in sustaining improved behaviours through inter-personal communication. There are more than 500,000 *swachhagrahis* across India driving the programme individually through behaviour change interventions at the grassroots.
What’s your opinion of the contribution made by the Tata Trusts and similar organisations to the Swachh Bharat initiative? How vital are such partnerships, and what more can they achieve?

The involvement of the private sector in sanitation is of key importance in not just accelerating the sanitation story of India, but also in sustaining the progress being made.

With *swachhata* [cleanliness] being ‘everyone’s business’, the private sector is increasingly including mainstream sanitation in their core work. It is stepping up to the plate, an excellent example of which is the work done by the Tata Trusts.

Your years at the World Bank took you to Vietnam, China, Egypt and Lebanon. How is the water and sanitation story in these countries relevant to the Indian reality?

The biggest lesson I have learned is that eliminating open defecation is not driven by the construction of toilets; it is driven by changing behaviour at the community level.

The approach must be tailored to specific local conditions. Strong political will and leadership at the highest level, combined with local administrative commitment, are key facilitators in achieving and sustaining success. What is interesting is that SBM addresses all of the above, along with acknowledging the importance of the four ‘Ps’: political leadership, public funding, partnerships and people’s participation.

What kind of memories do you have of your years in the IAS, especially as collector and district magistrate in Uttar Pradesh’s Bijnor district?

My time in the Indian Administrative Service was an important phase of learning for me. As collector and district magistrate in Bijnor, I was faced with various challenges and opportunities in the development agenda, which paved the way for my future career in international development.

It is my experience in the field that fortified my pitch for what we call the ‘PM-CM-DM-VM model’ — the prime minister sets the goals, the chief minister supports it at the state level, the district collector leads at the local level, and village motivators work at the grassroots level.

You represented India as a junior tennis player and you took a break from work to be the coach-manager of your tennis-playing daughter, Tara. What was that experience like?

Taking time to be my daughter’s tennis coach and manager was fantastic. As a former tennis player myself, it was great being a part of my daughter’s journey as she pursued her dream of becoming a professional tennis player. I eventually returned to the water, sanitation and hygiene sector, but the time we spent training and travelling together was definitely a highlight of my life and will always remain a great memory.
People first and profits to follow

The Foundation for Innovation and Social Entrepreneurship and its creation, Social Alpha, are blazing a brand new trail.
A smartwatch for the hearing-impaired that listens to emergency sounds, gives real-time notifications, speaks out pre-recorded sentences and enables users to dance in rhythm. A business model that integrates marginalised waste workers into the formal economy. A revolutionary MRI machine that is low on cost, high on quality and can be accessed by bottom-of-the-pyramid (BOP) sections of society.

These are just a few of the game-changing innovations being supported by the Foundation for Innovation and Social Entrepreneurship (FISE), a partnership initiative involving the Tata Trusts and the Indian government’s Department of Science and Technology.

Established in 2015, FISE has from its beginning been an end-to-end ecosystem that enables social entrepreneurs to provide products and services to underserved sections of the population, while also helping them navigate the different stages of their startup journey.

FISE has matured in the three years since it was launched to become an important platform for the infusion of resources and capital for social enterprises. And that platform has spawned Social Alpha, an initiative with a three-tier architectural structure that is plugging a variety of gaps — from identifying technologies in research laboratories and being an incubator for technology businesses to providing monetary resources for the growth and expansion of deserving enterprises. Social Alpha has thus far evaluated about 400 social sector enterprises and incubated more than 50 startups through its seed capital and sector-focused interventions.

“The entrepreneurial boom in India over the past decade has generated new employment opportunities, boosted trade and brought technology development to the fore,” says Manoj Kumar, Social Alpha’s chief executive and co-founder. “We are working to bring the benefits of this trend to a larger portion of India’s population at the grassroots level by harnessing the power of the market, and we are aiming to impact 500 social enterprises by 2022.”

Typically, asset managers are obliged to demonstrate success on financial or impact parameters to their governing bodies and investors. Consequently, impact-focused funds are often forced to prioritise their expected returns and exit timelines over the urgent and complex challenges of social development. Distinct from other players in the market, FISE concentrates on the generation of social impact rather than chasing after returns on capital employed.

“We have recognised that the need for ‘risk commensurate returns’ discourages the modern investor from investing in early-stage, high-risk social enterprises,” explains Mr Kumar. “This leaves a clear gap in the market, one that we at FISE seek to address with our unique ability to infuse capital into such enterprises. Our focus is on creating deep and irreversible social impact, and then ensuring that our enterprises continue to create enough revenue to sustain themselves and grow.”

A common thread that runs through each of FISE’s ‘incubatee’ companies is the use of innovative thinking and technology solutions. “Bringing effective and efficient products and services to the BOP market is the need of the hour,” adds Mr Kumar. “Science and technology-based innovations have the potential to bring about disruptive change in the lives of the community by creating high-quality yet affordable solutions that can address challenges in sectors such as healthcare, education, energy, and water and sanitation.”

Functioning with a deeper involvement than other incubators and investors, FISE undertakes a handholding approach and works closely with the entrepreneurs it seeks to support. With Social Alpha, the intent is to build
Less than a decade ago, waste pickers in Bengaluru were usually clubbed with beggars as people of no economic value. But thanks to the work of firms like Hasiru Dala and its enterprising founder and director, Nalini Shekar, things have improved dramatically. Today, the Bruhat Bengaluru Mahanagara Palike (BBMP, the municipal corporation of the city), issues official identification cards for waste pickers.

“The harassment they used to face has come down significantly,” says Shekar Prabhakar, cofounder and managing director of Hasiru Dala Innovations (HDI) — which means green force in Kannada — was set up in 2010 by Ms Shekar. Hasiru Dala Innovations (HDI) was incubated as a company by FISE in November 2015 and has investors that include the Foundation and Social Alpha.

“It was felt that a not-for-profit organisation was not the right one to steer the project, so the company was set up,” explains Mr Prabhakar. Interestingly, less than two years after being established, HDI has turned positive in terms of profits. “That’s a first in the sector,” says a proud Mr Prabhakar.

The company offers total waste management services, covering solid, garden and wet waste. It has also pioneered event waste management services, catering to institutions, large companies and individuals as well. At the recent Indian Premier League matches in Bengaluru, HDI deployed 250 waste pickers and it has also catered to several marathon events in India.

The projects provide ad hoc employment to waste pickers, who earn more money than what they would have otherwise. The average earnings of waste pickers who are part of the team has jumped dramatically: from between ₹4,000 and ₹8,000 a month to about ₹13,500.

HDI organises four-day courses for potential entrepreneurs among waste pickers, teaching them how to run a business and explaining to them concepts such as working capital. The company is currently engaged with 21 waste-picker entrepreneurs and has generated livelihoods for 184 people.
Where the news is silent and viewers see it all

It’s five in the evening and a television newsroom in Pune is agog with activity. Two newscasters are waiting to go on air. The studio head gives the signal and the anchors smile and face the cameras to begin a bulletin that is viewed by more than 15,000 viewers across India, Nepal, Bangladesh and Pakistan.

So what’s the big deal? It happens in thousands of television studios across the globe all the time. But wait. What’s unique about this particular news bulletin is that the two anchors are using sign language. Welcome to BleeTV, an exciting new platform built for the hearing impaired, one that uses an app to provide content in ‘Indian Sign Language’.

“There are 18 million hearing impaired in India who have access to sign language,” says Pune-based Janhavi Joshi, who co-founded Bleetech Innovation, a startup that caters to the hearing impaired by providing technological and design-driven solutions. Established in 2015, Bleetech is backed by Social Alpha, Nasscom and the International Red Cross Society.

In 2017, Bleetech launched AskBlee, using a WhatsApp number and encouraging the hearing impaired across India to ask a wide range of questions. “We got a huge response,” recalls Ms Joshi. Today, there are more than 16,000 people connected to the AskBlee community. “The platform has become very effective and hugely popular.”

sustainable and scalable enterprises. “We begin by identifying startup founders who are technologically aware, socially conscious and entrepreneurially confident,” says Mr Kumar. “Ensuring that they are motivated to adhere to our jointly determined milestones is pertinent. Through our engagement we provide them with all the knowledge, connections and resources — monetary and otherwise — that they require to have the best possible chance of succeeding.”

Committed to becoming an all-encompassing provider, FISE appoints mission-aligned portfolio managers in each of the startups it backs. Seed capital investments, which range from ₹3 million to ₹10 million, translate into small equity stakes in the startups. Experienced professionals are often attached to startup teams to lend them a hand with various aspects of business. Workshops on fund-raising and finance, compliances, marketing and product life cycle management are regularly held to supplement the skills of startup founders with a conceptual understanding of business principles. The startups can also avail of expert assistance in prototyping and hardware design. Furthermore, a system to offer legal advisories and consulting services is currently being shaped.

“Over the next five years, we want Social Alpha to emerge as a national societal platform with replicable protocols across sectors and across geographies,” says Mr Kumar. “We are open to tying up with the government, the private sector and other philanthropic
bodies to take this vision to scale. We plan to set up, in partnership, about 25 incubation centres and innovation labs across the country over the next three to four years."

This plan has already been set in motion and is rapidly picking up pace. In the past year, Social Alpha has established two centres: an energy incubation centre in Delhi, set up in partnership with the Government of India and Tata Power, and a healthcare incubation centre at the Indian Institute of Technology Delhi, set up in partnership with PATH, an international nonprofit with allied goals. The coming year is set to start with an incubation centre for agriculture technology (this will be in collaboration with an international foundation and a state government).

“Our team at Social Alpha is committed to the purpose of our existence,” says Mr Kumar. “Each of our employees understands the criticality of the work we do; even our work culture embodies it. We take pride in this unique organisational culture. It has facilitated a spirit of collaboration between our internal teams and our external partners. In everything that we undertake, what rings true is our mission of providing solutions for India’s development challenges through a model of innovation and social entrepreneurship.”

By Nithin Rao
‘My hopes for India are very bright’

Monkombu Sambasivan Swaminathan was 22 when India became independent. Five years later, this son of a surgeon completed his masters from Cambridge University, the stepping stone in a career — and a life — devoted to fighting for a different kind of independence: an India free of hunger and malnutrition.

Educated as a geneticist, Dr Swaminathan has become a legend on the back of a sequence of accomplishments that must surely rank him among the greatest Indians of modern times. Primary among these has been his contribution to agriculture, most notably the ‘green revolution’ he helped engineer in collaboration with American agricultural scientist and Nobel Peace Prize winner Norman Borlaug.

The recipient of a multitude of honours, among them the Ramon Magsaysay Award (1971), the Albert Einstein World Science Award (1986) and the first World Food Prize (1987), Dr Swaminathan — who celebrated his 93rd birthday on August 7 — speaks here to Christabelle Noronha about Indian agriculture and what can be done to lift the gloom enveloping it. Excerpts from the interview:

If you had to address the many crises confronting Indian agriculture, where would you begin?

The main crisis confronting farmers is an economic one. Simply put, farming is not viable in India from an economic standpoint. The younger generation does not want to get into agriculture and about 40% of farmers would take up other jobs if they had the option.

What is needed most now is to find the ways and means to increase productivity, and that requires our farming systems to be improved. You have to enhance productivity across the entire acreage covered by farming, in hill areas, coastal areas and irrigated areas. The benefits of achieving this objective are plenty. There is a job famine in the country today and agriculture is a job-creating enterprise.
Dr Swaminathan at the office of his foundation in Chennai (above) and with American agricultural scientist and Nobel Peace Prize winner Norman Borlaug in the wheat fields of the Indian Agricultural Research Institute near New Delhi in 1965.
How can the economics of agriculture be made good for farmers in distress, in the short-term and over the longer period?

A farmer’s income can be increased by improving productivity per unit area and by developing value-added products from straw, stem, leaf, etc (the Rice Bio-Park established by our foundation in Nay Pyi Taw in Myanmar in 2013 prepares and markets such produce). Additionally, farmer associations are needed to harness the power of scale by bringing together small farms. In the short term, the minimum support price, under the framework proposed by the National Commission on Farmers [NCF], can provide adequate income to save farmers from distress.

What can be done to encourage the new generation in farming families to take up agriculture?

In terms of attracting youth to agriculture, the NCF had suggested making it intellectually stimulating and economically rewarding. This can be done by conferring power and economy of scale to small and marginal farmers, both in the production and post-harvest phases of farming. Emphasis also needs to be put on restructuring agricultural curriculums and pedagogic methodologies to enable every farm and home science graduate to become an entrepreneur and to make agricultural education gender sensitive.

Women comprise 50% of India’s farmers and 60% of our agricultural workforce, yet they are neglected completely. When I was a Member of Parliament, I introduced a bill to provide for the gender-specific requirements of women farmers. This was to protect their legitimate needs and entitlements and to empower them with rights on agricultural land, water resources and more. Entitlements for women farmers are essential for the future growth and health of agriculture, as well as for the protection of food security in the era of climate change.

What are the advantages of the shift in emphasis from food security and staple foods to nutrition and crop diversification?

From food security to nutrition security, the advantage is that you have a healthier population. Nutrition security involves paying attention not only to hunger but also to things like protein hunger and hidden hunger, or micronutrient deficiency. Nutrition security strengthens food security and improves the ability of people to overcome deficiencies and lead healthy lives.

Water is a constant worry for farmers and the problem is getting worse across the country. What sort of solutions should we be pursuing to cope with this situation?

Water literacy and water security should be part of the agenda in schoolbooks; children should be made aware of these aspects. When I was young, there used to be a practice called ‘kudimaramat’ where the community prepares a tank for water harvesting before the onset of the monsoon. Community efforts of this kind have largely vanished. These
days everybody believes that it’s the responsibility of the government, without realising that rainwater harvesting can be done by anybody, whether in a village or in a town. Rainwater harvesting should, I believe, be made mandatory.

Coming to the world trade order, this depends on certain principles, essentially fair and free trade. Many a time the ‘fair’ component is erased, while ‘free’ remains. I suggested in 1992, when the ‘Dunkel Draft’ was being prepared, that there should be a livelihood security box for countries like India, where agriculture is not just a business but the foundation of livelihood security.

There has to be a differentiation made between commercial cropping and a livelihood security crop. The Indian government changed the term from livelihood security to food security and the arguments about this have continued on various portals. Livelihood security would have been much better.

**What about water sharing issues between states? How can equitable outcomes be secured here?**

Water sharing is a very big problem. It should, ideally, lead to win-win situations and not a win-lose situation. Equity in water sharing is critical for cooperation in harvesting water. Also, the rivers of India could be combined; we could then have an Indian Rhine, like the Rhine in Europe. You cannot do this in North India because the rivers that flow there — the Ganga, the

Dr Swaminathan says “there has to be a differentiation made between commercial cropping and a livelihood security crop”
Indus and the Brahmaputra — are international rivers. But the Krishna, the Godavari and the Cauvery are all under our control. These can be joined to create a navigation path for irrigation and for human consumption.

Our state governments should understand that only through cooperation can they deliver benefits to all their people. There is unrest on this front because we have allowed problems to fester; we have not addressed them in time. Back in 1992, I had suggested that there should be a ‘Cauvery river management board’ comprising Kerala, Tamil Nadu, Karnataka and Puducherry. This kind of a board would have been able to decide what is fair and what is not.

**Farming is going to become ever more critical for India, as you have reiterated on many occasions. How can we as a nation prepare for this reality?**

It is true that farming will become more important. There are not many countries that have surplus grain now and we have a population which will reach 1.5 billion by 2030. There will be a lot of undernourishment and protein hunger. Our malnourished children below the age of one will be hit the hardest. Their common abilities will be damaged and their intellectual capacity will be affected. Their future will be compromised.

We should attend to malnutrition with all the strength and resources at our command. India is a multilingual, multicultural country with great diversity. We need to have some priorities. We need freedom from hunger and unemployment, we need safe drinking water, we need a minimum wage, we need nutrition for everybody, and we need to pay greater attention to a clean environment, with the forests and oceans taken care of.
You have lauded the current government's efforts to make agriculture a viable proposition in India? What has the government got right and what more can it do?

Although the NCF report was submitted in 2006, very little action was taken until the government headed by Prime Minister Narendra Modi took office. Over the last four years, several significant decisions have been made to improve the income and status of farmers. The re-designation of the agriculture ministry as the agriculture and farmers’ welfare ministry means there is additional stress on using farmer welfare as a measure of agriculture progress.

The issuing of soil health cards to farmers has been crucial since soil health is basic to plant health, and plant health is basic to human health. Budgetary and non-budgetary resources have been allocated to promote micro-irrigation. Conservation and sustainable use of indigenous breeds of cattle is being encouraged. Activities such as apiculture, mushroom cultivation, bamboo production and agro-processing are being promoted to generate additional jobs and income for farm families.

The recent announcement of a remunerative price, essentially based on the recommendations of the NCF, is a very important step in ensuring the economic viability of farming. If all the schemes announced by Prime Minister Modi are implemented effectively by the state and central governments, the future of farming and farmers can be shaped to help India become a leader in food and nutrition security.

In terms of research and technology – including genetic engineering – what’s the way forward for agriculture in India and the rest of the developing world?

Genetic engineering provides an opportunity to create new gene combinations. But there are many other technologies that are critical, in soil-health enhancement, water management, post-harvest processing and value addition. The developing world is mostly made up of small farmers and many of our technologies, including green- and evergreen-revolution technologies, have widespread applications.

What is important is the allocation of adequate resources to agriculture, education and public health. I have suggested, for this purpose, that we should persuade all political parties to place the right emphasis on these issues in their election manifestos. We need to have an integration of political will and commitment and technological skills, as well as a public understanding of science. Jawaharlal Nehru once said, “The future belongs to science.” It also belongs to those who strike up a friendship with science.

As a public intellectual, what are your hopes for India?
My hopes for India are very bright. We have all the ingredients essential for developing a great nation devoid of poverty and hunger. This has been my goal and it has defined my work over the past half-century.

"Jawaharlal Nehru once said, ‘The future belongs to science.’ It also belongs to those who strike up a friendship with science.”
Behind bars, a social balm to heal and calm

Social workers are the agents of reconciliation and change in a path-breaking pilot project aimed at making Maharashtra’s prisons a more humane place

Hemant Yadav is hurting and it’s not merely the pain of being in prison that is causing him distress. Arrested on a child kidnapping charge, the 30-year-old migrant from Unnao in Uttar Pradesh has a degenerative spinal condition that flared up during the nearly two years he has spent in jail as an undertrial. In a wheelchair and unable to walk, barely literate and with no family to count on, Mr Yadav has been reduced to little more than a statistic as his case winds its way through India’s tortuous criminal justice system.

Lending a hand to inmates like Mr Yadav is central to the objectives of a path-breaking pilot project designed and implemented by the Tata Trusts in partnership with the Prisons Department of the Maharashtra government. Initiated in February 2017, the programme has a simple and fundamental premise: the necessity of making jails more humane, a place where those deprived of their liberty are treated ethically and with empathy.

The chosen method to get there is by the placing of social workers inside jails to
Crowded and counting

- India has 1,401 jails and 419,623 prisoners
- Maharashtra has 256 jails and 15,556 prisoners

Slow and unsteady

- There are more than 30 million court cases pending in India (as of March 31, 2016)
- The country has, on average, 10 judges for every million people
- The prison population in India increased from...
  - 272,079 in 2000
  - 384,753 in 2008
  - 419,623 in 2015
- India has 33 inmates per 100,000 people, among the lowest in the world (it’s highest in the United States: 666 per 100,000)
- India’s undertrials percentage of 67.2% is way above the second-worst performer (Brazil at 36.2%)
- There are in excess of 11 million prisoners globally

Impact on the inside

- The Tata Trusts prisons programme is aimed at having a visible effect on the everyday lives of inmates in the five central prisons in Maharashtra and in the borstal (or correctional) school in Nashik.
- Initiated in February 2017 as a collaborative effort with the Maharashtra Prisons Department, this pilot project has seen 19 social workers, including eight women, being placed on a full time basis inside the prisons.

The programme has reached out to more than 12,000 prisoners

The highlights:

- Health initiatives covering two-thirds of the prison population
- Help with legal aid for 623 undertrials
- Post-release backing for 41 inmates
- Emergency assistance for 56 families of prisoners
- Support in education and other needs for 308 children of prisoners
make it easier and more effective for the state to fulfil its responsibilities towards the imprisoned. Mr Yadav, lodged at Taloja Central Jail in Navi Mumbai, would certainly benefit from some attention. He needs spinal surgery for a disorder deemed critical, money for treatment, and the means to post bail that has already been granted. “I don’t want to remain bedridden,” he says with a forlorn look. “I wish there’s a cure for me.”

Ketan Jawade’s circumstances are not as dire but that’s not how he sees it. Once employed as a driver in Mumbai, he is now an undertrial charged with murder and has been in Taloja for more than two years, during which time he has been produced in court on a single occasion. “I’ve been trapped in a false case,” says Mr Jawade, 32, a swarthy man with the bearing of someone who knows the jail and its rules, written and unwritten. “I have no lawyer and I’m cut off from my family. I have no hope.”

‘I feel terribly depressed’
Dilip Chavan is slightly less bleak in his outlook. Accused of robbery and yet another undertrial, he has been behind bars for eight months. An orphan who grew up working in brickkilns, the 25-year-old Mr Chavan was arrested the day after his wife gave birth to their third child. “I feel terribly depressed,” he says. “I don’t get much sleep and I cannot keep the turmoil out. If I get released, I’ll go back to my village.”

Mr Yadav, Mr Jawade and Mr Chavan have all benefitted from the experiment of having social workers in the prison system. Mr Yadav got help with his bail application and could receive financial assistance for the treatment he so desperately needs. Thanks to a health intervention run under the project, Mr Jawade is rid of a chronic skin condition he picked up in jail. Mr Chavan’s wife and kids have been provided with rations and clothes, and he may well find the private lawyer he requires to properly argue his case.

The prisons programme incorporates five broad areas for intervention: health, legal aid, connecting inmates with their families, rehabilitation of the released, and vocational training. Besides these, it offers financial and other assistance to the families of inmates, taps into existing government schemes to help them, and advocates with state agencies while demonstrating the efficacy of having social workers dedicated to the task of prisoner welfare.

The programme has been rolled out in five central jails and at the Nashik borstal school (an educational and correctional institution for inmates in the 18-23 age group). There are 19 social workers attached to the project, two to each prison and separately for men and women. To say they have their hands full would be an understatement, given the endemic overcrowding in these jails and the consequent rush of requirements.

On the health front, the programme has medical camps and more to tackle, in particular, the skin and dental problems that are commonplace in prisons. The project provides unwell inmates with appropriate treatment and medicine, arranges doctor visits to jails, gets terminally ill prisoners released, has gynaecologists conducting sessions for women inmates, and organises first-aid training for jailors and the jailed.

Legal aid is an issue that cuts to the heart of the prison system and, with the huge proportion of undertrials behind bars, the need for it is immediate and crucial. The project has connected with the government’s ‘district legal services authorities’ to improve the quality of lawyer representation for undertrials and in securing bail for them.

Money is, predictably enough, a powerful lubricant in smoothening the delivery of justice (not for nothing is it said, only half in jest, that capital punishment is reserved for those without capital). The vast
were teething troubles to be overcome,” says Mangala Honawar, who is leading the prisons initiative for the Tata Trusts.

There was the necessity, too, of going beyond what had been envisioned on paper. “Our first insight was that the project required more,” says Ms Honawar, whose experience of India’s prison system stretches back to 2006, when she was a student at the Tata Institute of Social Sciences (TISS). “We had to consider categories other than men, women and children. That meant making space for the mentally distressed, for youth, the disabled and the aged.”

Keeping inmates in contact with their families is another key component of the programme. It’s not unusual for families to lose touch with, or give up on, their people. This can be devastating for inmates who lack the resources and the spirit to tough it out on their own in a menacing and unforgiving ecosystem. The efforts of the social workers have frequently resulted in sunshine stories emerging from the debilitation, physical and psychological, that detention induces.

Rehabilitation support

The rehabilitation element in the project focuses on supporting released inmates through financial assistance, linking them to after-care organisations, utilising government schemes to their advantage and working with the police to prevent a return to jail. The vocational courses run inside the jails contribute by enhancing the opportunities released inmates have for a reintegration into society.

The progress made by the prisons project has not been without hiccups, notably during its initial phase. The push back from the existing order was pronounced and the project itself had to be rejigged as the realities of prison life became more apparent. “We began by building bridges with the prison authorities, but there were teething troubles to be overcome,” says Mangala Honawar, who is leading the prisons initiative for the Tata Trusts.

There was the necessity, too, of going beyond what had been envisioned on paper. “Our first insight was that the project required more,” says Ms Honawar, whose experience of India’s prison system stretches back to 2006, when she was a student at the Tata Institute of Social Sciences (TISS). “We had to consider categories other than men, women and children. That meant making space for the mentally distressed, for youth, the disabled and the aged.”

The social worker plays the dual role of facilitator and pivot while trying to ensure that inmates can access the services they are legally entitled to. It’s not that the jail staff are cold to the plight of prisoners. Burdened by a heavy workload and the sheer numbers of those they have to keep in line, they are not equipped to do it all. “Rehabilitation of prisoners into society, for example, is not a task the system can accomplish without outside help,” says Ms Honawar.

The services due to prisoners have to converge and the social worker is important in making that happen. “This is full-time work and it has to be embedded in the system,” explains Ms Honawar. “There are 150-200 jailors in charge of anywhere up to 5,000 prisoners at any given time. This does not make for a secure or sustainable...
We see prisoners, first and foremost, as human beings; we don’t make moral judgements about their criminality,” says Arun Sawant with a conviction born of experience. One of the social workers in the Tata Trusts prisons programme, Mr Sawant is sure about what the jailed are in search of. “Most of all, they want you to hear their story. And we are there to listen. That’s how we win their confidence and build a relationship.”

Claretto Fernandes, a 40-year-old undertrial charged with kidnapping and murder, certainly wants to be heard. “The social workers are a help in many ways, simply because the difficulties prisoners face are many,” he says. Mr Fernandes, an officer in the merchant navy prior to his arrest three years back, points to overcrowding as the root cause that makes prisons such unliveable places. “A particularly pressing issue is the shortage of guards to escort us to courts. That means we miss on case hearings, which by themselves are delayed.”

Mr Sawant, who has a masters in social work and aspires to be a lawyer, is not inclined to mince words when describing the conditions behind bars. “There is no peace for prisoners,” he says. “The world inside an Indian prison today is about 50 years behind the times. The environment is not built for kindness or understanding. And prisons can be a university for wannabe criminals.”

Learning to cope with the multiple challenges prisons can pose has not been easy for Mr Sawant and his colleagues. “We were treated with suspicion initially but that phase is over,” says Sandeep Dighe, another social worker in the programme. “We have tried to prove our worth through our work, and it’s hard work. The load is heavy and I get depressed sometimes but I’ve learned to live with that. The flip side is that I get a good night’s sleep with every small victory.”

The victories have added up for Mr Dighe, a soft spoken and determined young man. “In the early days of the job, there were four cases of attempted suicides at Taloja, where I was posted; this year there hasn’t been a single such incident. The reason for these attempts by prisoners is a loss of hope — mainly due to their families cutting them adrift — and hope is what we try to rekindle. The despair extends to the jailors as well. They, too, are victims of the system.”

The way the social workers evaluate their work is simple: how have the prisoners benefitted from their efforts? “Social workers are essential in a prison; our work proves that and this pilot will reinforce the point,” says Mr Sawant. “I have no doubt that government-appointed social workers will become a reality at some point in the future. And the sooner it happens the better.”

Call of the cell
equation. By denying prisoners their humanity, you worsen their punishment and that does nobody any good.”

There’s a three-year time frame for the prisons project and the goal is to, by then, institutionalise the idea of social workers within jails. “The object is to have a cadre of social workers involved with prisoners on the inside and their families on the outside, but ultimately they have to be government appointees,” says Ms Honawar. “I believe the government understands that it has to take ownership of the programme. And there will have to be more than two social workers in each jail, of course.”

The way it is set up, the prison system treats incarceration as punishment — and societal retribution — rather than as a pathway to rehabilitation. Laypeople on the outside are largely indifferent to, even oblivious of, the inequities such a system perpetrates. That makes it difficult for change, much less reform, to take hold. But the intent and the commitment to make change possible are clear, from the top rungs of the administration to the jailors, the people at the vanguard in any prison.

The human touch
“What our prisons lack is the human touch,” says Rajvardhan Sinha, Maharashtra’s inspector general (prisons), who has been associated with the project since its inception. “Our biggest problem is overcrowding and the reason is the number of undertrial inmates we have. Our biggest challenge is infrastructure and that is connected to overcrowding. Limited resources mean our jails are like rat houses.”

Mr Sinha is convinced about the worth of the prisons project, though he is cautious about reaching conclusions in a hurry. “The start was slow but [the social workers] have learned and they have proved their usefulness. The concept is absolutely good and this is different from any other kind of social work. However, it is premature to evaluate the impact it has actually made on the inside. We need more time and we need more social workers.”

Prison reform is, in Mr Sinha’s view, vital in the context. That translates into courts in jails, alternative punishments, rehabilitation and, crucially, a different approach towards women and children.

The collaborative aspect of the project is what Nayantara Sabavala, director of programme design at the Tata Trusts, is keen to emphasise. “We have tried to show the government — successfully, I think — that we are all part of the system,” she explains. “We don’t sit in judgment. Our approach is to say that these are our common issues. The question is: how can we, together, come up with solutions and resolve them?”

The prisons programme grew out of an initiative called Prayas, which took shape nearly two decades back as a TISS project and has been supported by the Tata Trusts ever since. “Prayas pioneered this work and they are our technical partners,” says Ms Sabavala, under whose watch the current programme was seeded. “We would not have been able to do this without them.”

The team of 24 involved with the initiative is just as definite about what the prisons programme has brought to the fore, and about its future potential. “This is probably the first time such an exercise has been carried out in an Indian prison setup,” says Ms Honawar. “We have learned from our missteps and we know we cannot change everything. I’m certain that putting social workers inside jails on a permanent basis would be invaluable.”

The 15,556 inmates in Maharashtra’s prisons are likely to agree. ■

The names of the prisoners in this article have been changed to protect their identity.

By Philip Chacko
Every autumn, the residents of Delhi and its neighbouring regions are enveloped in a brown haze that drifts across from the fields of northern India, where farmers burn the stubble in their lands in order to get them ready for the next crop. Thousands fall sick with respiratory diseases and the air pollution index goes through the roof. The culprit is, strangely enough, rice.

Traditionally Punjab was not a rice growing state. But farmers in the state have, over the decades, been cultivating rice in the kharif season (June-to-October) because there’s money to be made from it, thanks to the ‘minimum support price’ offered by
The widespread burning of this agricultural waste is a significant source of air pollution, particularly in the early winter month of November, across large swaths of northern India. Millions of people, especially around Delhi and its neighbouring regions are left gasping by the toxic haze that stubble burning causes.

Stubble burning is not good for the land either, diminishing soil health and long-term agricultural productivity. Besides, organic carbon and about 280,000 tonnes of nitrogen, sodium and potassium also gets wasted. And yet farmers continue to burn stubble, despite knowing the ill effects of it for the health and well-being of people, including their own families. For them there is no other simple and cost-effective way to clear their fields. Using a combine harvester does not suffice, as the machines cut the stubble but leave behind mounds of straw.

**Problem and solution**

If rice straw is the problem, it also represents a solution. Of the total amount of nutrients lost in paddy farming, 25% nitrogen and phosphorus, 80% potassium, 50% sulphur and 50-80% of micronutrients (including zinc, copper, iron, manganese) are retained in the rice straw. The soil is deprived of a sizeable amount of plant nutrients when the straw is removed.

What was needed was a way for farmers to use the stubble instead of burning it. Researchers at the Punjab Agricultural University (PAU) in Ludhiana developed an optimal solution for this. Called Happy Seeder, it is a seed-sowing machine that works with the remaining rice stubble to ensure that the wheat crop gets planted and germinates properly.

“From day one we involved farmers and manufacturers in the development process,” says Harminder Singh Sidhu, senior agricultural engineer with the government.

Farmers can earn a steady income from rice farming and today over 80% of Punjab’s land area in the kharif season is under paddy cultivation.

So far, so fine. The problem comes right after — with the straw residue left behind after the rice is farmed. This straw has to be got rid of before farmers can sow their second crop, typically wheat, and within a couple of weeks. A clean field is necessary and so the farmer puts a matchstick to the straw and within a short time the field is ready for the next crop.

It is estimated that around 23 million tonnes of rice crop residue is burned each year in Punjab, Haryana and western Uttar Pradesh.
Borlaug Institute for South Asia. A former PAU professor, he was a key member of the team that developed the technology.

Happy Seeder took years to design and develop, and is now being offered as the ‘ideal’ solution to address the stubble issue. It sows the seeds and removes the straw at the same time, scattering it evenly across the field. This straw helps the soil retain the moisture necessary for wheat-crop germination, and decomposes naturally over time.

Starting early
The family of Dilpreet Singh, 27, is among the early adopters of the Happy Seeder. With 85 acres of land under cultivation in Budhlada in Mansa district, Mr Singh’s father is among the more affluent farmers in the region. He bought the machine last year and has no reason for regret. “Our wheat crop yield went up from 24 to 26 quintals in just one season of using Happy Seeder,” says Mr Singh.

While this incremental growth in yield may not appear substantial, these are early stages yet, says Baljinder Singh Saini, area manager of the RGR cell. RGR stands for ‘reviving the green revolution’, a Tata Trusts initiative to holistically improve farm productivity and incomes. The RGR cell has been working with PAU for a solution to the crop burning issue and it has been pushing for Happy Seeder to be used more extensively in Punjab.

The challenge lies in convincing farmers. Happy Seeder has been around for a couple of years but its pricing has been a sore point. Currently costing around ₹160,000, it has been unaffordable for a majority of farmers, especially those who work with small land holdings. For these marginal farmers, it doesn’t make sense to invest such a large sum when they are able to manually clear their fields in a day or two by simply burning the stubble.

To promote wider adoption of the machine across the state, the Punjab government has stepped in with a subsidy. For individual buyers, the subsidy is 50%, while for farmer groups and cooperatives it is as high as 75%.

Another challenge is getting farmers to use the right equipment at the rice harvesting stage. The sowing with Happy Seeder is easy in fields where rice has been harvested with combine harvesters that have a ‘straw management system’ (SMS), which ensures that the chopped paddy straw is distributed evenly across the field, laying the ground for Happy Seeder to sow the wheat crop.

According to Mr Saini, there is an obstacle in the form of combine harvester owners. They earn ₹1,000-1,100 an acre by using their machines for paddy harvest, and are not keen on incurring the additional cost of the SMS equipment. However, with the government stepping in, they are expected to come around to the idea.

Missing piece
Awareness building has been a crucial missing piece in this exercise thus far. Recently, RGR deployed trained kheti doots (scouts) to educate farmers on available farm equipment, use of the machinery, and to address their apprehensions. These scouts have been handpicked from among educated youth residing in the villages, and were trained at the PAU campus on farmer outreach methods. There are 108 such scouts working in the nine districts where RGR has been operating since 2008.

RGR, with its coalition partners, plans to conduct training camps and field days with demonstrations at farmers’ holdings. The intent is to create model zero-burn village clusters through the adoption of Happy Seeder in select
Engineers of CSIRO Griffith at Punjab Agricultural University, Ludhiana, developed the first prototype of the Happy Seeder in July 2001 and it was first sold to a farmer in Ludhiana district in 2007.

Many farm equipment manufacturers are now making these machines, which have undergone a variety of improvements to include features such as compatibility with the farmers’ HP tractors and the incorporation of straw spreaders.

Studies have validated the benefits that the Happy Seeder has delivered through residue incorporation in the soil, and through savings on input costs.

The Tata Trusts assigned this project to the Punjab Agricultural University in 2009 to work on popularising the Happy Seeder and Rotavator machines. Farm-level demonstrations were conducted over a two-year period across Jalandhar, Kapurthala, Patiala and Fatehgarh Sahib districts to accelerate the adoption and use of Happy Seeder and Rotavator.

A working coalition of the Nature Conservancy, the Borlaug Institute for South Asia, the International Maize and Wheat Improvement Center and the Council for Energy, Environment and Water, along with the RGR cell (an associate organisation of the Tata Trusts) has begun work to promote the adoption of these machines in a phased manner across Punjab.

This coalition plans to tap into corporate funding and governmental resources for the deployment of around 158 Happy Seeder machines under this project. In addition to utilisation of government subsidies for the purchase of machinery, companies committing funds will, it is envisaged, sponsor clusters of villages.

The Happy Seeder journey

Farmer meets and demonstrations were organised across Punjab to educate farmers about the use and benefits of Happy Seeder.
districts in a phased manner, covering a significant area within four years.

This push strategy being pursued also involves support such as phone apps, videos and assistance for securing subsidies and purchase of the machines. The project will be monitored through GIS mapping of purchase and deployment of Happy Seeders to identify ‘non-burn’ fields.

**Zero-burn villages**

“Around 50 districts will be covered over the next three years, and around 1,500 villages will be turned into zero-burn villages,” says Mr Saini. This will be done by adopting clusters of 15-20 villages each to create visible impact over a sizeable area. The government’s current drive through mandates and subsidies is expected to be a prime mover for wider adoption of Happy Seeder.

However, the initiative needs to be accompanied by awareness and education programmes. Says Mr Sidhu: “Rushing into it could create more problems than it will solve. It is better to go small and then scale it up through demonstrable results.”

Right now, RGR is working at a furious pace to build a database of existing machinery with farmers and cooperatives. State-level advisory groups and district-level technical groups are being formed to push the database, and a variety of workshops have been conducted to sensitise the government and other stakeholders.

The Tata Trusts are backing the Happy Seeder project as it offers multiple benefits. It helps increase soil productivity while reducing climate change impact, thus benefitting the farmer, the soil and the air.

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**Partners in farms**

The ‘reviving the green revolution’ (RGR) initiative, launched by the Tata Trusts in Punjab in 2002, aims to popularise diversification in agriculture. It does this by helping shift some of the land area currently under a predominant paddy-wheat cropping system to crops that consume less water and serve as an economically viable alternative to paddy growing.

The initiative also focuses on reducing costs of production, value addition to crops for enhancing profitability from farming, conservation of natural resources, especially soil health and sub-surface ground water, and protecting the environment from the pesticides and pollution caused by crop residue burning.

The RGR cell is housed in the campus of the Punjab Agricultural University (PAU) in Ludhiana. PAU is the technical partner for the development of technologies.

In association with the Punjab government’s Department of Agriculture, RGR acts as the extension wing for transfer of technology. Banking on the presence of RGR in nine districts of Punjab, the cell also acts as a bridge to share farmer feedback on the various technologies that have been developed by PAU.

By Vikas Kumar
Thumbs up for a direct connection

Subsidised fertilisers straight to the farmer — that’s the idea driving a distribution system with multiple benefits

Elimineni Sambasiva Rao is benefiting from an exercise in efficient farming that could well become an example for agriculture all over India.

Mr Rao, a 55-year-old from Rayanapadu, a picturesque and thriving agricultural village in the Krishna district of Andhra Pradesh, is among 550,000 farmers who are part of a pilot project called the 'Aadhaar-enabled fertiliser distribution system' (AeFDS), which is designed to ensure that subsidised fertilisers reach the actual beneficiaries —
AeFDS enables end-to-end monitoring of the fertiliser supply chain

Under AeFDS, fertiliser companies are paid the subsidy only after retailers sell the fertiliser directly to farmers

976 fertiliser retail outlets across 50 sub-districts were covered under this project

There has been an 8% reduction in fertiliser usage, in just one year, under the project

₹450 million is the amount saved by the state government annually thanks to AeFDS

Launched in March 2016, AeFDS is a direct-benefit transfer model designed to help farmers avail their quota of subsidised fertilisers

The project was piloted in Krishna district of Andhra Pradesh

Roadmap for reform

farmers — prevent pilferage and save valuable public funds.

“AeFDS is based on Aadhar-enabled biometric authentication and ensures that farmers actually get the benefits intended for them,” says Ahmed Babu, who as the collector of Krishna district conceptualised and steered the project with the support of the Tata Trusts. “The pilot was designed to include end-to-end monitoring of the fertiliser supply chain, from the manufacturers to the farmers.”

A direct benefit transfer-based model, AeFDS was piloted by the Krishna district administration in partnership with the Trusts in March 2016. Initially 976 fertiliser retail outlets, including primary agricultural cooperative societies and
private retailers across 50 sub-districts were covered under the pilot. Later 1,050 fertiliser retail outlets in West Godavari district were also included in the project.

The significance of the AeFDS is that it will play a critical role in making India’s agriculture economy more efficient and the government’s subsidy flow less leaky.

**Subsidies for agriculture**

Agriculture is vital to India’s economy. About 55% of the country’s population is engaged in agriculture and allied activities, according to the 2011 census. In view of its critical importance for the nation’s food security, the Government of India heavily subsidises agricultural inputs such as fertilisers and pesticides.

At more than ₹700 billion, fertilisers are the second most heavily subsidised item (after food grains) in the public distribution system and comprise 30% of total subsidies given out by the government. The urea subsidy bill for 2018-19 alone is estimated at ₹450 billion. In addition, there is the forex burden to consider as India relies heavily on fertiliser imports. The country imports 25-30% of its requirement of urea, 90% of diammonium phosphate (DAP) and 100% of muriate of potash (MOP).

The central government’s Department of Fertilisers makes these farm inputs available to farmers at low rates and the subsidy — ranging from 30% to 70% of the cost of the fertilisers — is reimbursed to manufacturers.

What happens on the ground is often different from the playbook. Despite the government’s best intentions, subsidised fertilisers are often siphoned off for non-agricultural use. Urea is used in the manufacture of dyes and inks, coatings, plastics, paints, glues, animal feed and pesticides. Furthermore, unscrupulous traders and even manufacturers often inflate the amount of fertilisers distributed to profit from public money. “Not only were farmers not receiving the fertilisers but a substantial amount of government money was being wasted,” says Mr Babu.

Alarmed by the diversion of fertilisers to non-farm use and the serious loss to the exchequer, the Indian government had launched a series of initiatives to plug the leakages and strengthen the fertiliser distribution system. For example, selling neem-coated urea, which puts the fertiliser in slow release mode while also rendering it useless for non-farm use, has been made compulsory for all fertiliser outlets.

Various institutional mechanisms, such as the fertiliser management system, mobile fertiliser management system and the integrated fertiliser management system, were also introduced to monitor the import, production and movement of various subsidised fertilisers and the processing subsidy claims.

**Inadequate to appropriate**

These interventions, though successful in monitoring the movement of fertilisers from the plant and port up to the retailer level, proved inadequate in ensuring they reached farmers. It is against this background that the AeFDS was developed. The intent is to ensure timely and correct distribution of fertilisers and to effectively monitor their sales.

AeFDS is based on a biometrically-authenticated model that requires

“The earlier system allowed anyone to purchase fertilisers. They could buy it in their name or someone else’s. The situation was so bad that fertilisers were being bought by people showing fake IDs or IDs of people no longer alive.”
beneficiaries (the farmers) to authenticate their identity through Aadhaar cards at the retail outlets. “The earlier system allowed anyone to purchase fertilisers; people could buy it in their name or someone else’s,” explains Mr Babu. “The situation was so bad that fertilisers were being bought by people showing fake IDs or IDs of people no longer alive.”

AeFDS makes it mandatory for registered users to personally visit retail shops and authenticate their identity through biometrics-based point-of-sale (POS) machines. As a result, only genuine beneficiaries can avail the subsidy benefits.

In order to further foolproof the system, the AeFDS database was integrated with Webland, the Andhra Pradesh government’s land revenue database, and with the central government’s soil health cards (soil analysis reports that provide crop-wise recommendations of nutrients and fertilisers).

Implementing this proved to be a herculean challenge for the district administration and other stakeholders. The Tata Trusts were roped in by the Andhra Pradesh government to design and develop everything — from the operating protocols to support in providing infrastructure for the project.

An entire ecosystem had to be designed and implemented from scratch: finding the POS machines, seeding Aadhaar numbers, and training and educating manufacturers, wholesalers and retailers in participating in the system. “Training sessions were conducted in Telugu to educate stakeholders about transacting on the POS machines,” says R Pavithra Kumar, head, south zone, the Tata Trusts.

All-round success

The AeFDS system has proved to be a remarkable success on several counts. The farmers are happy as they now are far more likely to receive their rightful share of fertilisers. “Earlier, we were at the mercy of the retailers and often had to purchase from the open market as the stock wasn’t there.
Besides farmers, AeFDS has proved beneficial for fertiliser retailers, too. The sale through POS machines has reduced average transaction time, substantially cut down the time taken for inventory management and decreased the manual effort required to prepare reports. “The machine displays land record details and corresponding soil health information based on the farmer’s Aadhaar number,” says V Srinivasa Rao of Devarapalli village in Krishna district. “It also shows the quantum of fertiliser required, and generates the bill for the transaction. All this takes just two minutes on the POS machine.”

Out with the manual
“Earlier we had to manually maintain the records but after the implementation of AeFDS, stock management and generation of daily and monthly reports are done by the POS machines,” says Sudhakar Rao, a retailer from Rayanapadu.

The AeFDS programme’s biggest achievement has been increasing the accountability of stakeholders, including fertiliser manufacturers, wholesalers and retailers. It has also enhanced transparency, with improved tracking of the physical movement of fertilisers from manufacturers to farmers.

The larger benefits and financial savings for the exchequer encouraged the Indian government to extend the AeFDS programme to 17 districts across 10 states in April 2017. A scale up across the 250,000 fertiliser retailers of the country is being planned in a phased manner.

For the Tata Trusts, this successful partnership with the government has proved the efficacy of their policy to support initiatives aimed at bringing about change on a large scale by employing technology to maximum effect.

By Samod Sarngan
An overcast sky provides the perfect backdrop for the Suryaganga, a gently flowing river framed by lush, green vegetation. All that can be heard is the chirping of birds and distant vehicle sounds. Looking at the picture-perfect setting, it’s hard to believe that this green oasis was, until recently, barren land.

The Suryaganga, which now flows through Shendola Bk village in Amravati, Maharashtra, had been dry for the most part of 40 years. Continuous silt deposits had raised the level of the riverbed, and during rains, water would quickly overflow into the surrounding farmland and destroy crops.

Shendola Bk is part of Vidarbha, a region that has often featured in the news for drought and farmer suicides. Summers here were harrowing, with wells and bore wells running dry. For months at a stretch, Shendola Bk’s villagers had to rely on water tankers provided by the district administration. Reviving the Suryaganga was clearly a priority, but the project had been stuck in administrative procedures.

Things took a turn for the better in 2017 after Shendola Bk was brought under the purview of the Village Social Transformation Foundation (VSTF), a public-private partnership initiative that

Impact in fact

A private-public partnership has brought multiple entities together to transform 2,500 villages in Maharashtra by 2019

Sustained efforts led by the Foundation have transformed the Suryaganga river in Shendola Bk village in Maharashtra’s Amravati district from a dry river into a healthy and perennial water body.
Village Social Transformation Foundation’s focus areas
A group of around 12 toddlers play inside a bright pink room with colourful illustrations on the walls and toys ready at hand. This cheerful looking building in Pathrad Gole is the *anganwadi* (child-care centre), where kids up to six years of age spend a large part of their day. Just a year ago, the situation was very different: few children attended the *anganwadi* as villagers preferred sending their little ones to private schools with better facilities.

Once Pathrad Gole came under the VSTF programme, the team looked at improving preschool education. The local administration, the villagers and Kiran Ghorpade, the VSTF fellow, worked together to transform the *anganwadi*. The building was refurbished and converted into a learning centre through educative illustrations on the wall. Toys were bought to make learning fun for the children. The new *anganwadi* has received a great response with more children being enrolled. The Tata Trusts are also working to provide digital learning content for the children.

One challenge was that the *anganwadi* building had no electricity. To resolve this, the Trusts partnered SELCO (a sustainable energy services company) to install solar units to power the lights, fans, a television and a water purifier. Now plans are on to organise capacity building workshops on solar energy for the villagers. This could lead to the development of solar entrepreneurs who could take over the maintenance of the systems installed at the child-care centre.

The positive spirit has affected the youth of the village. A group of around 15 teenage girls has caused a stir with their efforts to make a difference in their village. From cooking and serving meals to children in the *anganwadi* to campaigning for road repairs, from organising health camps for women to confiscating alcohol that was being illegally sold in the village, these girls have done it all.

They have chalked out plans, raised funds, tackled tough issues, created awareness and brought about a perceptible change in the village in just one year. What is even more commendable is that they have done all this despite the opposition they have faced from some villagers.

The most impressive transformation that is being seen is in the girls themselves. Earlier, these teens rarely stepped out of the house to socialise. It is a different story now. Their confidence has increased, they have a say in family discussions, and despite the occasional raised eyebrow from the villagers, continue their weekly gatherings and their improvement drives. The girls say they have even bigger plans to transform their village.
advanced technical expertise of private CSR teams to support holistic rural development. “Through VSTF, the partners involved in the mission are able to reach more than 600,000 beneficiaries,” says Mr Poduri.

The target villages were selected on the basis of several parameters: their ranking on human development indices, recommendations by the district collector, and the development partners’ presence on the ground. Activities were spread across 12 focus areas to enable a holistic development of the villages. Technology has been a key factor.

**Understanding the village**

The Tata Trusts have helped develop monitoring tools with features such as geotagging, offline and remote functionality, and local language support. These tools support the development of dashboards from primary data that help understand the village at a granular level and enable rigorous monitoring.

A crucial aspect of achieving impact involves understanding the villagers’ requirements and being able to facilitate that. “This is a partnership that includes the village itself,” said Ratan Tata, the chairman of the Tata Trusts, at the time of VSTF’s launch. “Some of the best ideas and thoughts in terms of what can be done in the village come from the villagers themselves. This project ensures that they are not ignored.”

This is where the ‘chief minister’s rural development fellows’ come into the picture. These are young professionals who are chosen after a rigorous selection process and live in the VSTF villages for two years to oversee development work. The work starts with a socioeconomic analysis to ascertain the needs of the locals. The fellows then act as facilitators between the community, government, corporate enterprise and NGOs to improve programme delivery.

Such engagement is what got the Suryaganga river project active again after years of being stalled. The locals give credit to Vaishnavi Kayalkar, one of the fellows, for unrelentingly following up with local officials, including the district collector. “I would begin my discussion with this topic at every meeting and insist that it had to be done because my villagers urgently required water,” says Ms Kayalkar.

Shendola Bk is testament to the fact that the fellows have been game changers. “The fellowship is a core tenet of this mission and the fellows’ ceaseless advocacy is what sets a VSTF village apart from the rest,” says Mr Poduri. “The Foundation appoints fellows who can understand government budget processes, comprehend the bureaucratic situation and effectively pitch for the village’s requirement. The village community is happy to see that development tasks that hadn’t happened in the last 40 years have now been completed in just one year.”

The Tata Trusts have been integral to the success of VSTF in terms of financial support and in driving the rollout of the fellowship programme. “As a knowledge partner, we support the setting up of VSTF’s infrastructure to ensure the mission’s sustainability,” says Mr Poduri. “As the lead partner we mentor the fellows, work on capacity building and facilitate implementation of the government’s programmes.”

**Capacity building**

The Trusts have collaborated with organisations such as SELCO Foundation, Unicef and the Quality Education Trust (a pioneer in its field) to organise capacity building workshops for the fellows.

There is an additional investment from the Trusts — a hands-on, feet-on-the-ground approach (*see Power of the Collective on page 52*). “We provided the villages with
funds and on-ground support to get the cement pipes in Shendola Bk to help connect the Suryaganga water to the fields,” says Mr Poduri. “Our technical engineers visited the site to ensure work was being done correctly. The villagers came together and built the farm road themselves. So this project brought people together in all aspects, from finances to programme management. This is exactly what the VSTF initiative aims to do.” The team also steps in when required to help the fellows.

Another important role that the team handles is converging VSTF and the Tata Trusts’ programmes. “The Trusts run a lot of programmes in rural development and we bring as many as possible on board,” says Mr Poduri. For example, the Sukhi Baliraja initiative team has partnered the district administration to set up 80 commercial poultry units in Amravati. Farm ponds that were dug up in Chandrapur and Yavatmal under the Jalyukt Shivar project are now being converted into inland fisheries. The Trusts directly supply fish seeds to the beneficiaries. Once the fish larvae grow into fingerlings, the farmers sell them in the market. “These projects have a huge impact and ensure sustainability,” adds Mr Poduri.

Under VSTF, the Trusts currently reach up to 40,000 beneficiaries in 36 villages in three districts. Plans are on to expand to 76 additional villages in existing regions and in districts such as Akola, Nandurbar and Dhule. VSTF’s success has boosted confidence that this innovative programme will not only transform Maharashtra’s villages, but also provide valuable learning for other state governments as well as corporate India on how to achieve sustainable social impact.

By Priyanka Hosangadi
Residents of Gopalpur in the Ganjam district of Odisha scan the skies regularly as they watch out for the cyclonic storms that frequently hit this coastal village and, almost as frequently, leave havoc in their wake. But what they spotted recently was astonishing indeed — unidentified flying objects.

The objects were drones deployed under a programme — jointly undertaken by the Government of Odisha and the Tata Trusts — to conduct an aerial survey of nine urban local bodies of Ganjam and Puri districts. This survey of slums by unmanned aerial vehicles is part of the Tata Trusts engagement in a pioneering urban rehabilitation project being implemented by the Odisha government.

Urban rehabilitation is a critical move for Odisha, where 23% of the population

Homes ahoy

Drones are the unlikely allies in a programme that employs eye-in-the-sky technology to help provide land rights to 1 million slum dwellers in Odisha’s urban centres
Mr Tata described the distribution of land rights as “earthshaking” and “far-reaching” and promised the Trusts’ support for it.

The habitat mission — also known as the Jaaga mission — aims to hand over land titles to the largest-ever group of such beneficiaries: about 200,000 households in all. The mission covers not just housing but also aims to improve urban living standards by providing piped water, individual toilets, good roads, street lighting and common facilities like parks and playgrounds.

**The Jaaga mission**

G Mathi Vathanan, Odisha’s commissioner-cum-secretary, housing and urban development, says that the government realised that merely giving land rights to slum dwellers would not improve their lives. “We conceptualised the Jaaga mission to convert existing slums into liveable habitats,” he says.

The land rights piece in the mission covers 1 million people living in 2,000 slums across 109 towns. The Odisha Liveable Habitat Mission aims to hand over land titles to 200,000 families. Improvement of living standards in the slums is also on the agenda.
across 109 towns of the state. Covering this area through manual surveys would have taken years. This is where the Tata Trusts stepped in with a technology solution.

“We identified technical agencies and guided them to deploy drones to conduct aerial surveys and map the slums,” says Shishir Dash, who leads the urban habitat project for the Trusts in Odisha. Deploying a dozen drones helped speed up the survey process. The outcome: Odisha will be issuing 200,000 land titles by the end of 2018.

The government has provided ₹1 billion for the mission in the current year’s budget. It has also invested about ₹4 billion in the Atal Mission for Rejuvenation and Urban Transformation to ensure that every slum household will get two piped water connections. And there’s Awaas, launched in 2015, which aims to enable housing for all and provide financial assistance of ₹200,000 per beneficiary.

**It’s going to be tough**
The scale of the challenge that lies before the state administration is monumental. Of the 2,000 slums covered by the mission, about 1,000 come under five municipal corporations and the rest are spread across 100 urban local bodies. The Odisha government decided to speed up the survey by using technology and allocated the technology and capacity building tasks to the Trusts.

“We provided rigorous training for government officials and volunteers,” adds Mr Dash. “We gave them tablets and developed applications to collect information.” The Tata Trusts are partnering international organisations like the Norman Foster Foundation, the Omidyar Network and Cadasta for technological support.

This is a programme deliberately designed to not bring beneficiaries to government offices. It adopts a community-based approach with the focus on doorstep delivery of services. NGO partners will visit the slums and collect the required household information. “We are happy that in the pilot phase, covering nine urban local bodies consisting of 47 slums in two districts, about 2,000 land rights certificates have been distributed without the slum dwellers visiting any government offices even once,” points out Sangramjit Nayak, director, municipality administration.

The project has introduced new ways of working. For instance, a WhatsApp group was formed and it includes everyone from the urban development commissioner to collectors of all the 30 districts of the state, executive officers, NGO representatives and volunteers.

Other well-known institutions are also associated with the Trusts in implementing this pilot programme for the Jaaga mission. They include the Indian Institute for Human Settlement, the Tata Institute of Social Sciences, the Centre for Urban and Regional Excellence and about 26 local NGOs.

Shikha Srivastava, head, urban habitat and migration with the Tata Trusts, points out that this project will be a blueprint not only for other similar ones in India but also for other parts of Asia. “The basic premise of the project is to give ownership to communities, empowering them and making them partners in the development process,” she says.

The significance of the Odisha pilot project is that it brings in technology and dynamism in resolving age-old civic problems. The success of the urban transformation project in Odisha will be a path-breaker for similarly challenged habitats in emerging economies around the world.

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By Nithin Rao
‘Odisha cannot improve at the cost of the poor’

Chief Minister Naveen Patnaik’s determination to transform Odisha is the driving force behind his government’s effort to improve the lot of slum dwellers through landmark legislation and trailblazing programmes. In this interview with Horizons, he explains why transforming slums into liveable habitats has to be a non-negotiable component of the urban agenda of every state in India.

What kind of social development do the Land Rights to Slum Dwellers Act and the Odisha Liveable Habitat Mission promise?

Odisha has created history and emerged as a model state by according land rights to urban slum dwellers. The slum dwellers as well as their political representatives have welcomed this unique initiative of my government that helps address urban poverty.

The intent is that the urban poor living in slums will get land rights as well as a liveable habitat, and this will improve their quality of life. The process is underway. I personally review the programme and have made it a priority for my government.

What are the challenges you have faced in rolling out the programme and what have you learned along the way?

The challenge has been in meeting the expectations of our people within a stipulated time period. The key learning has been that Odisha cannot improve at the cost of the poor, and specifically the urban poor. We needed to bring in proactive policy changes that acknowledge the challenge of developing slum settlements and address the community’s aspirations.

The capacities of local governments to undertake slum land settlement through transparent and good governance has to be strengthened. We need to identify and secure adequate — and additional — funding to carry out further slum improvisation activities. My officers are on the job to make this process simpler and quicker.

I am happy that the Tata Trusts are partnering the Government of Odisha in this project, providing technical support, and bringing in global partners like the Norman Foster Foundation, the Omidyar Network and Cadasta. The Trusts are helping us in adopting best practices and in learning from international benchmarks.

“The challenge has been in meeting the expectations of our people within a stipulated time period.”
The two initiatives are unique and path-breaking. Can they be replicated in other parts of the country?
Transforming slums into liveable habitats has to be a non-negotiable component of the urban agenda of all state governments in India. The unique Land Rights to Slum Dwellers Act aims to provide a distinctive opportunity for economic, social, political and environmental transformation on a massive scale. Our approach on this is progressive and is being driven on a multi-sectoral and convergent basis.

Will the rollout of such programmes help tackle the urban crisis that is confronting India?
All major cities in India are combating the issue of slums. Slum populations have not been accounted for through inclusive planning and have remained underprivileged. Through the Odisha Liveable Habitat Mission, we have attempted a three-pronged approach to tackle the issue.

Our approach is as follows: first, stop eviction and demolition. Second, adopt a curative approach by upgrading slums through physical improvement (street lighting, infrastructure for drainage and solid waste, etc), social and economic measures, as well as land and tenure security. Third, use preventive measures such as affordable housing solutions. This three-pronged approach will greatly enhance the capacity of our cities to fulfil the needs of new migrants in urban areas.
Bahraich, Shravasti and Balrampur are three districts of Uttar Pradesh (UP) that share their borders with Nepal. But floodwaters from the ferocious Ghaghara — the largest tributary of the Ganga by volume, and also its second longest — which originates near lake Mansarover in Tibet and roars down for more than a thousand kilometres before merging with the main river in Bihar, has for centuries devastated life in these areas.

The perennial flooding by this river has impacted life in the three districts, destroying villages and causing widespread damage. The result: they are among the most backward districts in India.

Earlier this year, Prime Minister Narendra Modi initiated the ‘transformation of aspirational districts’ programme, covering 117 districts — and representing about 15% of the country’s population — that have lagged behind the
Fuel for hope and ambition

Sakina has a major grievance. When people in her village suffer from ailments, there are not many doctors around to treat them. “When I grow up, I want to be a doctor,” says the standard VIII student at the girls’ residential school in Bahraich. Sakina’s home is about 20 km away from the residential school and she goes there once a month. She admits that her parents want her to pursue her education. And they want her to take up a medical course.

Reeti Kumari, another student at the school, says she wants to become a district magistrate. Both girls are articulate and confidently discuss their career plans. “We have now learnt how to use computers and constantly access sites like YouTube,” says Reeti.

At their residential school they also play badminton and kabaddi. Like Sakina and Reeti, many other talented girls at the school are now aspiring to go to college, to study further to realize their dreams.

rest of the country in terms of socio-economic conditions, health and nutrition, education and basic infrastructure. Bahraich, Shravasti and Balrampur are among five such districts identified in UP.

Amrita Patwardhan, head, education and sports at the Tata Trusts, points out that low human development indices in places like Bahraich had led the Trusts to launch initiatives in eastern UP to improve the lives of 50,000 children, adolescents and women by creating a learning environment. This would be through measures such as providing quality education, life-skills training and continuing support to the existing education network.

About two-and-a-half years ago, the Trusts took up work to improve education outcomes in five districts of the state (besides the three, Varanasi and Pratapgarh are the other districts). “Our effort in these backward districts is to work on multiple components so that there is a much deeper impact,” says Ms Patwardhan. That means working with government schools and anganwadis (child-care centres).

The Trusts’ education intervention in eastern UP is based upon the life-cycle approach, where the educational needs of those in the 3-to-45 age group are addressed through multiple components: early child education, school learning and improvement programme, adolescent education, integrated approach to technology in education and women literacy programme.

Coming together

On September 29, 2018, the Trusts, in collaboration with the state’s Department of Basic and Secondary Education and its Social Welfare Department, and the corporate social responsibility arm of Sumitomo Mitsui Banking Corporation, organised an event at the government residential school for girls in Risia of Bahraich to demonstrate the existing work of the Trusts and to discuss the challenges around education and how to tackle them.

“A significant part of this event is to see children from one of the most remote parts of the country — and a region that has been labelled as the one of the most backward — being exposed to the latest in technology,” says Nayantara Sabavala, director of programme design at the Tata Trusts. “We see technology not as an end in itself but as an enabler for learning. It connects these schoolgirls to 21st-century skills, helping them use it in their everyday lives.”

Ms Sabavala notes that when she first came to the school about a year back, the girls rushed into the classrooms, which had
personal computers on display, after dumping their footwear in an unwieldy heap outside. “This time I notice that they have lined up their footwear very neatly outside and are doing things in an orderly fashion.”

According to Ms Sabavala, the students at Bahraich are using technology to not just deepen their knowledge, but also to connect it with their daily lives. “Some people assumed that because the students were not exposed to technology before this, there would be some resistance. But I don’t see any time lag in their absorption of new technology; they are comfortable adapting to it.”

The Trusts have adopted a two-pronged strategy for implementation. First, through partner organisations and, second, directly deputing a team on the ground. The Trusts have a direct implementation team of 120 members working in eastern UP. Its school learning improvement programme provides a learning experience in mathematics, environmental studies and language to school-going children from standard I to standard V. It also aims to improve teacher-student participation, community-school participation and the overall academic environment of the schools. Other focus areas include setting up libraries in the schools, promoting sports activity, creating a print-rich environment and providing the necessary resources to teachers to adopt child-centric pedagogy.

**Change is in the air**

At Bahraich, for instance, the parents of Chandni, a five-year-old girl, were reluctant to send her to the *anganwadi*. But their visit to the centre changed their perspective and the girl is now enrolled there. Also at Bahraich, 58-year-old Rajkumari was ridiculed by both men and women for attending a women’s learning centre set up by the Trusts. Now an active participant at the centre, she has become smarter and more confident.

“We are also encouraging the setting up of libraries in schools and ensuring that the children have access to books besides their regular syllabus,” explains Ms Patwardhan. “And we are working with nonprofit partners in ensuring that these children have access to libraries.”
Educational institutions in the backward regions of eastern UP have been a major challenge for the Tata Trusts team and volunteers. Many of the schools have a solitary teacher and basic requirements like blackboard, floor, boundary wall, toilet and drinking water facilities are in bad shape. “Even the floors in the classrooms are cracked,” points out Ms Patwardhan.

“Infrastructure is the biggest problem,” adds Amita Jain, the Lucknow-based regional manager of the Trusts. “In primary schools, just 10-15% of students attend classes. Many children come only for the midday meals that are served.”

In the past, the Trusts used to work in the region through partners; this is the first time it has taken up this project on a ‘direct implementation’ basis in the eastern part of the state. Says Ms Jain: “We work with a lot of partners, including the state education department and the government schools. We now cover 180 government schools in eastern Uttar Pradesh.”

**Persistence pays off**

The persistent efforts of the Trusts and its partners have begun to show a positive impact. The Bahraich girls’ residential school, where the event was held, shows a remarkable transformation. The girls have been sprucing up the sprawling compound and have also painted the walls of the school in recent weeks. The classrooms have improved significantly and there are boards that the teachers can actually use.

The Bahraich girls school has been given ‘smart’ status. Laptops and printers are increasingly being seen in many of the classrooms. The Tata Trusts field team members are armed with tablets, smartphones and cameras. Sumitomo Mitsui Banking Corporation has provided support for more than 80 laptops and 80 tablets for the eastern UP initiative. “Our aim is to make the children self-confident and improve their thought processes and communications skills,” says Ms Jain.

With things changing for the better, there is a growing demand from the state administration, the local community and the school management for more such interventions, notes Ms Patwardhan.

**Breaking the shackles**

For 22 years, Sakhir Ali has been in the teaching profession and is today the headmaster of a government school in the remote town of Bahraich. He is proficient in multiple languages, including Hindi, Urdu, Arabic and English.

The school is now part of the ‘madrassa improvement programme’ of the Tata Trusts, which sees active participation by children, teachers and other staff members across 50 madrassas in eastern Uttar Pradesh. The programme implements child-centric education and a modern curriculum through community participation, madrassa management and teacher ownership. The efforts are bolstering overall learning outcomes.

“Students today are very ambitious, with many from our school wanting to become scientists,” says Mr Ali. “And ever since the Trusts have been associated with this project, their interest in computer studies has gone up remarkably.”

By Nithin Rao
‘Zero tolerance is an aspirational goal’

Improvements are best fostered through guidance rather than policing, and Pawan Kumar Agarwal, chief executive of the Food Safety and Standards Authority of India (FSSAI), is using this insight effectively while managing and overseeing the responsibilities of a critically important regulatory body.

Mr Agarwal, who took charge at the helm of FSSAI in December 2015, has been encouraging open interactions with all stakeholders in the food sector as he pursues multiple objectives. The food we eat should be hygienic and safe, whether it is at a five-star hotel, from a street-side cart or inside our homes. This, he believes, will happen by facilitating a change in mindsets across the entire spectrum of the food business.

In this interview with Christabelle Noronha, Mr Agarwal talks about the links between food safety and nutrition, collaborations with social sector partners, and FSSAI’s role as a guardian of public health. Excerpts from the interview:

What do you feel distinguishes India’s focus on food safety from that of other countries?

We have studied and learned from what food authorities around the world do, applied it to conditions in India, and redefined our role accordingly. Similar institutions in other countries focus primarily on food safety, but our mandate under the Food Safety and Standards Act is larger — we have to ensure availability of safe and wholesome food. The word ‘wholesome’ has been added to bring in the element of nutrition. That makes our job far more interesting than merely looking at regulation for food safety.

Food safety and nutrition are closely intertwined; food may be nutritious, but unless hygiene and sanitation are maintained, its nutritional benefits get affected and it may even become harmful. We have zero tolerance for deviations from food standards.

Where nutrition is concerned, however, there is an element of individual choice. We can only nudge people towards healthy food choices.
Our role in nutrition is more nuanced, and it is here that we are working with the Tata Trusts, particularly in addressing issues of micronutrient deficiencies, also known as ‘hidden hunger’. I know that the Trusts have a strong focus on nutrition, particularly on fortification, which is a low-cost and effective way of addressing micronutrient deficiencies.

**How has the partnership between the FSSAI and the Tata Trusts helped in addressing the issue of micronutrient deficiencies?**

With the support of the Trusts, we have set up the Food Fortification Resource Centre (FFRC). This centre is co-located within FSSAI, which is a huge advantage given the critical need to monitor food fortification processes and ensure quality control.

Apart from setting the standards for fortification, we need to continuously review the industry. Cooperation between FFRC and FSSAI on what is happening in the field enables synergy between the fortification promotion efforts and our regulatory role.

**FSSAI collaborates with several social development partners apart from the Tata Trusts. How have these efforts helped?**

Most of our development partners are working on activities related to...
food fortification, where they build on one another’s efforts rather than compete among themselves. Fortification programmes that need large-scale implementation have to be embedded in government programmes.

Our development partners work on both fronts, with state governments to ensure that fortified staples are used in safety net programmes, and with food businesses to ensure open-market availability of fortified food products. What we have achieved over the last couple of years is far more than what has happened in the last two decades.

**How do you go about improving standards?**

Our food safety ecosystem is still evolving. Obviously, western nations are far ahead of us. In the United States, for example, the Food and Drugs Administration was founded in 1906. FSSAI is fairly new; its first chief executive was appointed in 2008 and it became functional only in 2011.

We are still in the process of establishing systems and processes to ensure that food businesses take care of food safety, but we have covered a lot of ground already. FSSAI is far more visible today than it was a couple of years ago. It is treated with respect and its advisories and guidance notes are taken seriously. There is far more reporting in the media now on FSSAI’s activities. The government, too, is taking a keen interest.

A large part of food safety is about perception; the public worries that what you get in the market is adulterated, and that there are safety issues even with branded products. I can only say that, in reality, the general quality is not so bad. We have to demonstrate that the food that you get in
the market is safe. To ensure this, we have to undertake large-scale surveillance of the food in the market, which we have started recently.

**How do you ensure that state governments act in unison?**

The food safety law is a central law and the state food safety commissioners work within its framework, and we work with them in a coordinated manner. But people are not concerned with whether food safety is the state’s responsibility or the centre’s; they feel it is the government’s responsibility, and the government must discharge that responsibility.

**What role do you see for civil society organisations in enabling FSSAI to improve outcomes?**

I think civil society can play an important role, particularly in India. We do not have too many large or effective civil society organisations focused on safeguarding consumer interests, and a country this size needs many such organisations and institutions. India needs a consumer movement.

**Are there major variations among states in implementing standards and procedures?**

Yes, there are big variations in the states’ response to food safety. Some states, such as Kerala, Jammu and Kashmir, Gujarat, Maharashtra and Tamil Nadu, have a stronger emphasis on food safety than others. In many instances, this is because of tradition or because of individual officers.

In any case, regulatory management in any country has always been a responsibility of the government. In India this was earlier seen purely as a means to prevent adulteration. Now, with the establishment of FSSAI, it is increasingly seen as an integral part of public health regulation.

**What about street food? Is that also the responsibility of FSSAI?**

Yes, we do regulate it. Street food vending falls in the ‘petty business category’ and vendors have to register with the authorities. Our effort is to educate vendors and change their mindset on hygiene and sanitation rather than police them. We have undertaken a massive programme for training street food vendors across the country.

**How far are we from reaching ‘zero-tolerance’ on food safety?**

Zero tolerance is an aspirational goal. Food safety, in scientific terms, is about hazards and exposure to those hazards. The entire concept of zero tolerance is a continuous process to make foods safer by constantly raising our standards. We have to constantly evaluate our zero tolerance standards and keep lowering the hazard limits.

Our basic concern is the microbiological hazards which arise from hygiene and sanitation. To tackle this, we can’t just police street vendors and small businesses; we have to get them into the habit of maintaining hygiene and sanitation. It will take us a while.

“The public worries that what you get in the market is adulterated, and that there are safety issues even with branded products. I can only say that, in reality, the general quality is not so bad.”
Monumental effort

The Qutb Shahi Heritage Park in Hyderabad is a unique necropolis complex built during the reign of the Qutb Shahi dynasty, which ruled the Hyderabad region in the 16th and 17th centuries. In 2013, the Tata Trusts partnered the Aga Khan Trust for Culture to restore the major tombs and structures at the site. The results — as these before-and-after images reveal — have been striking.

The tomb of Jamsheed Quli Qutb Shah, the second ruler of the dynasty, is a graceful octagonal structure that stands at the western edge of the park. Conservation work on this monument included cleaning of the dome, replastering the structure with lime mortar and restoring its plinth, all of which took two years to complete.
The clear water in the ‘after’ image reflects the arches and corridors of the stepwell known as Badi Baoli. To transform it from its dilapidated state took more than four years and plenty of skilled and unskilled labour.
The tomb of Ibrahim Quli Qutb Shah soars high with exquisite plaster work. The inside façade of the tomb was cleared of debris and cement plaster, the patina was cleaned and plant roots were removed.

The corner minarets of the Mohammad Quli Qutb Shah tomb shine with something like their original lustre. They were cleaned and covered with a final finish of lime putty, restoring the traditional lime mortar layer. Conservation work on the façade included removing cement plaster and ensuring that no further water damage takes place.
Restoration work on the imposing Sultan Quli Qutb-ul-Mulk tomb took nearly two years. The monument has exquisite stucco work — petals below the dome and the merlons on the parapet and minarets — which was redone using traditional techniques (with references sourced from archival images dating back to the 1860s).
Talent at the top is need of the hour

India’s social development sector has to concentrate on upping its leadership quotient to become more professional, transparent, effective and innovative

India’s social sector — without doubt the largest, most diverse and most vibrant in the world — is facing some of its toughest challenges. With the alarming rise in inequity and inequality and the massive scale of social problems that we as a nation continue to grapple with, the sector has enough work on its hands, and then some.

On the brighter side, there has been a surge in funds flowing into the country’s social sector. Today, the sector’s revenue pool is an estimated ₹700 billion, with money coming in from various quarters, including corporate social responsibility (CSR) funding. Thus, if we have complex social problems to solve, we also have more funds than ever before to address these problems. Importantly, we have countless individuals and organisations committed to bringing about social change.

What we don’t have, though, is adequate leadership to manage all these factors efficiently. While philanthropy and the recent increase in CSR funding have certainly provided a much-needed financial boost to the sector, there is also an increased expectation of professionalism, transparency, innovation and effectiveness from organisations. There is a growing emphasis on results, scale and efficient use of funds, which calls for a different kind of skill set, one that the social sector has traditionally not paid enough attention to.

Practitioners and funders echo the opinion that relatively little investment is being devoted to cultivating leaders. According to a survey conducted by Bridgespan last year, more than half the NGOs polled do not believe they are capable of recruiting, developing and transitioning leaders. Further, 40% of respondents complained of the struggle to attract senior leadership to their organisations. In other words, the social sector in India is facing a huge leadership deficit.

Potential takes a hit

A dearth of good talent, especially at the senior level, limits organisations’ ability to reach their full potential. A cursory look at the largest nonprofits in the country will reveal that, despite the increased funding available to the sector, there are barely a handful of ₹1-billion organisations.

Without guidance and leadership at the senior level, it is impossible for organisations to improve performance, become efficient and attract additional funding. And that could compromise the quality and size of the impact these organisations can have on the ground.

It is the right time, therefore, for organisations and sector leaders to take the leadership question seriously. We need to invest more in terms of commitment and funds to develop leaders within our organisations. At the same time, I believe
we also need to look outside the sector to identify and develop this talent. We now need to actively recruit senior talent from the corporate sector to bridge the talent gap in senior positions.

Most senior corporate executives typically possess valuable sets of skills and management experience that can be transferred to the social sector with some guidance, sensitisation and on-ground exposure. Senior leaders in the corporate sector are trained to think and manage scale and implement large, complex projects — with an eye on results. This is something the social sector needs desperately right now.

If we look at organisations that have scaled remarkably in recent times, we see a strong injection of corporate talent into them. Akshaya Patra, Kaivalya Education Foundation and Save the Children, with their business-like focus on processes, people, technology, leadership development, etc, are great examples of how nonprofits can use corporate talent, skills and strategies to achieve social impact. The good news for the sector is that a number of corporate leaders are now actively looking to switch to the social sector.

**Easing the path**

The critical issue here is to identify and orient such talent and support them while they explore their options in the sector and finally make the transition. Intermediaries such as India Leaders for Social Sector...
Perspective

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(ILSS) are working on providing a platform to create an informed movement of leadership talent into the social sector. ILSS's nine-day leadership programme, for instance, is designed to orient senior corporate executives towards understanding social issues, while creating the space and opportunity for them to engage more deeply with solving these issues.

Pipeline for tomorrow

While a lateral movement of senior talent will help bridge the immediate gap in leadership, we also need to think longer term about creating a talent pool for the future. This would include not just structured avenues for existing talent within organisations to grow, but also high-quality aspirational programmes aimed at creating a leadership pipeline for tomorrow, akin to what MBA programmes do in the corporate sector.

That's where we require initiatives like the Indian School of Development Management, which offers a one-year postgraduate programme in development leadership to prepare young professionals for a career in leadership and management in the social sector.

It is still early days but the preliminary feedback from the development community to these initiatives has been positive. We require many more similar institutions to facilitate lateral movement of leadership talent as well as to nurture future leaders.

There was never a better time and opportunity for India’s social sector to start focusing on developing its leadership. Increased funding is helping remove the critical bottleneck of low salaries, while simultaneously pushing the emphasis on scale and result orientation. We need to leverage mid- and senior-level corporate talent with years of management experience under their belts, as well as nurture young and passionate future leaders through structured programmes.

We also need to open our minds and hearts to such talent crossing over from other sectors to the development side. This would do wonders for our sector and for our country’s development. ■

“The good news for the sector is that a number of corporate leaders are now actively looking to switch to the social sector.”