TATA TRUSTS

OCTOBER 2025

HORIZONS

CANOPY OF CARE

Quality, affordability, accessibility and awareness — the cancer care programme of the Tata Trusts has a comprehensive spread

HIGH ON HARMONY

Tribal musicians are at the heart of a fellowship programme in Kerala that celebrates their culture

STIGMA SLAYERS

It's natural, it's healthy — that's the message of an impactful menstrual hygiene management programme

INTERVIEW

Archana Mehendale on what's keeping India from scoring higher in education and child rights

EDITORIAL

Cancer can be contained, and it can be beaten as well — that's the belief driving the comprehensive and many-hued efforts of the Tata Trusts to help India cope with a burden of tragic proportions. Our cover story details the different components in the cancer care programme of the Trusts, from the 'distributed care' model to partnerships to the setting up of cancer centres big and small in underserved regions.

This is a programme built on the pillars of affordability, accessibility, high-quality care and awareness-building. Easing the suffering of patients and their caregivers, particularly the poor among them, is one of the primary objectives of an initiative that has been strengthened through a range of partnerships, with governments and institutional bodies, with private sector enterprises and philanthropies. We have highlighted one such partnership, with Federal Bank, which provides funding to needy patients at hospitals supported by the Trusts.

Social scientist Archana Mehendale is our interview personality in this edition of *Horizons.* With an expertise in education and child rights built over more than three decades of research and advocacy, Ms Mehendale offers a fresh perspective on the state of schooling in India, and the necessity of giving children their due in the country's development agenda. In our 'opinion' section, Arnab Mandal of the Tata Trusts examines artificial intelligence in the context of social development.

Also in our coverage is a feature story that swings to the beat of an exceptional endeavour based in Wayanad in Kerala. The Earthlore Fellowship programme celebrates tribal musicians, their traditions and heritage in an environment where the lines between tutors and learners are non-existent.

Images tell the story in our showcase segment, which this time focuses on a subject that in many parts of India continues to evoke stigma and silence. The 'menstrual hygiene management' (MHM) programme of the Trusts has touched the lives of women and adolescent girls — and men and boys, too — in seven states. Its message is simple and potent: menstruation is a natural and healthy physiological phenomenon, to be managed with dignity and without fear.

Christabelle Noronha

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

CONTENTS

VOL 8 | ISSUE 4 | OCTOBER 2025

COVER STORY

6
ONE AIM, MULTIPLE WAYS
Comprehensive and wide-ranging, the cancer care programme of the Tata Trusts has played a vital role in helping India cope with the burden of the disease

BY INVITATION

20
THE LADY LIVES ON
Established by Dorab Tata in memory of his wife, Meherbai, the Lady Tata Memorial Trust continues to support leukaemia research

PARTNERSHIPS

23
A SAFETY NET TO CUT COSTS AND SUFFERING
Underprivileged cancer patients at hospitals supported by the Tata Trusts have been provided a lifeline by Federal Bank's funding for diagnosis and treatment

26
'A GOOD PARTNER IS A NECESSITY'
Managing director and chief executive KVS Manian on Federal Bank's commitment to cancer care and the enduring partnership with the Tata Trusts

FEATURE STORY

29
SONG SUNG TRUE
Tribal musicians are at the heart of a remarkable fellowship programme in Kerala that celebrates their culture and heritage

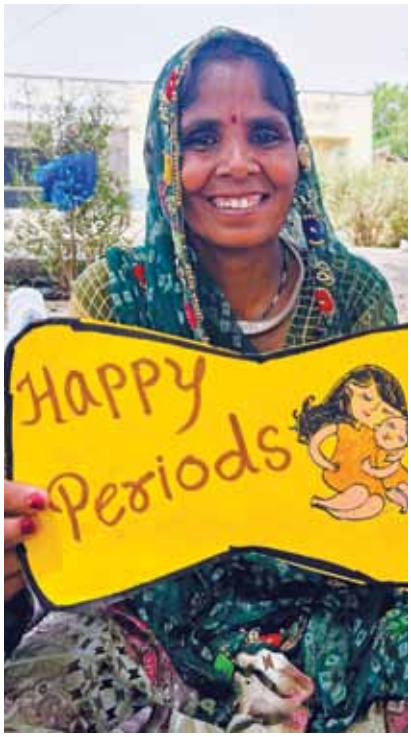
EDITOR
Christabelle Noronha
Email: cnoronha@tatatrusts.org

EDITORIAL TEAM
Philip Chacko
Labonita Ghosh
Gayatri Kamath
Shubha Madhukar

EDITORIAL COORDINATOR
Sonia Divyang

DESIGNED BY
The Information Company

SHOWCASE



34
NATURALLY HEALTHY
The impactful menstrual hygiene management programme has reached more than 191,000 rural women and adolescent girls — and some 45,000 boys and men as well — in seven states

INTERVIEW

42
'WE NEED DEEPER EDUCATION REFORMS'
Social scientist Archana Mehendale speaks about education in India and the question of quality, and why children should be top of the development agenda

OPINION

47
AI FOR SOCIAL GOOD: PROMISES AND PRAXIS
Artificial intelligence can do a world of good for society and its systems in many ways if used ethically and with care, but pulling that off is far from straightforward

Cover image
Patient, doctor and nurse at the Ranchi Cancer Hospital and Research Centre in Ranchi, Jharkhand

DESIGN
Shilpa Naresh
Abraham K John

PRINTED AT
Sahaya Print Services

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

DISCLAIMER
All matter in *Tata Trusts Horizons* is copyrighted. Material published in it can be reproduced with permission. To know more, please email the editor at horizons@tatatrusts.org.

(above) **A community** awareness and sensitisation session on cancer being conducted before a screening drive in a village near Ranchi in Jharkhand; **a doctor at** SVICCAR in Tirupati, Andhra Pradesh, gets a patient ready for a scan

One aim, multiple ways

Comprehensive and wide-ranging, the cancer care programme of the Tata Trusts has been playing a vital role in helping India cope with the increasing burden of the disease in the country. There are multiple components in this programme, from building hospitals and institutions in underserved regions to cementing cancer care partnerships, fostering research, funding training initiatives and creating community awareness. The end objective is to provide accessible, affordable and high-quality cancer care to patients, particularly the neediest. By Labonita Ghosh, Gayatri Kamath and Kishore Rathod

Means and methods

The cancer care programme of the Tata Trusts encompasses a range of components and approaches

Institutions for cancer care
The Tata Cancer Care Foundation and the Assam Cancer Care Foundation

Capacity building
...through fellowships for oncologists and training for oncology nurses

Establishing cancer hospitals
...in Maharashtra, West Bengal, Assam, Uttar Pradesh, Jharkhand and Karnataka

Fostering pan-India collaborations
...with the National Cancer Grid and the Navya portal

Diagnostics, treatment and screening
(daycare centres, screening kiosks, palliative care units and diagnostic services)

Creating public awareness campaigns
Gaanth Pe Dhyaan for breast cancer and Khud Se Jeet for cervical cancer

Corporate partnerships
...with Pfizer, Bandhan Bank, Siemens Healthineers and Federal Bank

The pyramid rises

Inventive and effective, the 'distributed cancer care model' rests on the pillars of accessibility, affordability, quality and community outreach

Sibu, a daily wager from Sivasagar in Assam, was going about his life when he discovered he had a tumour in his mouth. Initial tests at the nearby Assam Medical College and Hospital (AMCH) indicated a possibility of oral cancer and surgery. Having spent ₹15,000 on investigative radiology tests, a huge sum for him, Sibu realised he would need more money for further treatment.

It wasn't just the money. The 50-year-old was unsure where to go for his procedure. The State Cancer Institute (SCI) in Guwahati, which has a reputation for providing good and affordable care, was his best bet. But that was 350km from Sivasagar, a journey that would take Sibu at least 10 hours by road. He would also have to find accommodation, adding to his expenses. A better bet for Sibu was the Dibrugarh Cancer Centre, just 80km away. He decided to continue his treatment there — and it saved his life.

The Dibrugarh Centre is part of the 'distributed cancer care model' (DCCM) promoted and supported by the Assam Cancer Care Foundation (ACCF), a nonprofit formed by the Tata Trusts in partnership with the Assam government in 2017. It comprises a multi-tiered system — like a pyramid — with the Guwahati

Tea garden workers gather for a cancer awareness camp in Chubwa in Assam's Dibrugarh district

SCI at the apex and a range of cancer care facilities under it to provide step-down services.

"The distributed cancer care model is based on two principles," says Dr Rajendra A Badwe, former chief executive of the Tata Cancer Care Foundation and ex-director, Tata Memorial Centre (TMC) in Mumbai. "First, how common is the cancer and, second, what is the optimum number of patients required to be treated so that we can get the best results?"

High and low

For instance, gall bladder cancer is widely prevalent in West Bengal, Bihar, Odisha, Uttar Pradesh and the whole of the Northeast, where it collectively affects an estimated 20 of 100,000 people every year. But in Mumbai the incidence may be as low as 0.002 per 100,000. "That's why there is less of a need to create infrastructure in western India for this type of cancer," adds Dr Badwe. "The uniqueness of the problem and the number affected dictate the kind of systems and infrastructure required in a particular place."

This includes population density. The incidence of all cancers in urban areas is 100-120 per 100,000 people per annum. In semi-urban areas this number drops to 60-75, and in rural India it is about 40-50. "There is the need, consequently, to distribute the facilities for cancer care slightly differently across India," says Dr Badwe.

Till recently, cancer facilities were largely concentrated in the metros and tier-2 cities. Developed by the Tata Trusts to address this

The robotic surgery setup at the State Cancer Institute in Guwahati

Four plus four

The 'distributed cancer care model' is built on four principles:

1. **Enhanced access:** Healthcare facilities within reach of communities, reducing the need for long-distance travel
2. **Uniform high-quality care:** Ensure consistent, high-quality standards across all levels of care
3. **Affordable care:** Make treatment affordable and accessible to a wider population
4. **Awareness, early detection and palliative care:** Focus on educating the public, encouraging early symptom recognition, and providing palliative care

The model's infrastructure has four levels of care:

- **Level 1 (apex centres):** State-of-the-art facilities providing comprehensive services, including radiation, surgery, medical oncology and advanced diagnostics
- **Level 2:** Dedicated cancer units within government medical colleges or multispecialty hospitals
- **Level 3:** District hospitals with diagnostic and daycare units, including chemotherapy services
- **Level 4:** Community-based outreach, including screening kiosks and mobile screening, and home-based palliative care

countrywide need, DCCM has four objectives: better and easier access to cancer facilities; affordable treatment; uniformly high-quality care; and awareness, early detection and palliative services.

The model has primarily been operationalised in Assam, a state lacking in cancer hospitals, with the larger goal of improving cancer care outcomes in all of Northeast India. The aim is to replicate DCCM in other states as well.

"Earlier, we had only two cancer hospitals in Assam, at Guwahati and Dibrugarh," says Dr Jai Prakash Prasad, ACCF's chief operating officer. "People would travel to other states for treatment, to the Tata Memorial Hospital in Mumbai, the Tata Medical Center in Kolkata and the like. Medical colleges in Assam did not even offer oncology as a subject, so there was no possibility of getting trained doctors and staff either." DCCM has changed all that.

At the top of the DCCM structure is the level 1 hospital, equipped with a variety of oncology, laboratory and research facilities. In Assam, this position is occupied by SCI Guwahati. The next tier, level 2, has comprehensive cancer centres linked to government medical colleges, offering oncological and some allied services. These are at Dibrugarh, Silchar and Barpeta, with two more coming up at Diphu and Dhubri.

Diagnostics and daycare

At level 3 are diagnostic and daycare centres, providing radiotherapy and chemotherapy, that are annexed to district-level hospitals. Assam has five such centres, in the more far-flung areas of Kokrajhar, Lakhimpur, Jorhat, Darrang and Tezpur, with plans for six more (Goalpara, Nalbari, Nagaon, Sivasagar, Tinsukia and Golaghat).

Finally, at level 4 are the outreach and awareness programmes, including community screening via 'Swasth Assam (health) kiosks', and home-based palliative care. This level promotes early detection while also disseminating information in the community, via frontline workers, about medical and financial aid options for patients.

Door-to-door visits and follow-ups ensure that those from poor and underserved communities don't abandon their treatment due to a lack of money or knowledge about the affordable and care-appropriate facilities within their reach. Timely intervention is also seen as crucial in halting the advance of cancers.

DCCM is driven by referrals, with lower-tier facilities — which offer limited services — pushing the more urgent cases up the ladder for the next level of intervention. This enables patients like Sibu to start their diagnostics and initial treatment at a facility closest to their homes, rather than visit faraway hospitals.

"About 60% of our patients are below the poverty line, and we don't want them to travel for more than two to three hours to access the nearest cancer facility," says Dr Prasad. "Otherwise, travel and accommodation costs alone can put them in financial distress. Our on-ground patient navigators organise vehicles or ambulances to ferry them back and forth. This is important to build confidence among people that a cancer centre nearby, offering the same level of facilities and care as a top hospital, is a preferable alternative."

An important component of the model, one that minimises patient travel and ensures quality

The launch of the cancer survivorship programme at the Diphu Cancer Centre

care, is Navya, a second-opinion portal. Patients fill out a detailed questionnaire, upload their test and biopsy reports and scans, and an AI tool generates an expert opinion from doctors attached to the National Cancer Grid, the pan-India network. Based on this, patients can understand if they are on the right treatment path, or if they have been prescribed a course that doesn't quite fit with Indian (or global) protocols. "Navya makes excellent use of AI," says Dr Badwe. "We have crossed more than 120,000 opinions already."

Participants at a cancer awareness event in Dibrugarh

The Navya advantage

The tool explores cancer guidelines in India and abroad and suggests an evidence-based, tailor-made treatment plan to doctors. "About 75% of the time, there is concurrence with the treating physician," adds Dr Badwe. "In 25-30% of cases there may be some deviation, which can be corrected. We need a tool like Navya to provide uniform care across the country."

If distributed cancer care were viewed as a hub-and-spoke model – with the level 1 hospital a hub and the step-down facilities as 'spokes' connected to this hub – India may require as many as 30-35 such systems. "That infrastructure will take 15-20 years to build," says Dr Badwe.

Whether a facility is a hub or a spoke is decided by four factors: population, cancer incidence, type of cancer, and terrain. "Geographically, we need to understand where else in the Northeast we can set up hubs," says Dr Prasad. "The whole region may require several hubs instead of just one at Guwahati. But the standard of care must be maintained throughout."

The hub-and-spoke model offers differentiated (and therefore more accurate and efficient) management of cases. Hub hospitals, with their best-in-class facilities, specialised equipment and doctor-experts, can cater to both common and complex cases, leaving the 'spokes' to deal with the more treatable types. "The main idea is for patients to get a good percentage of treatment close to their home," says Dr Badwe.

At an initial cost of ₹5-6 billion to set up, with a recurring annual cost of ₹1 billion, a hub hospital is an expensive proposition. Which is why it also needs to be financially sustainable. "We utilise the same infrastructure for people who can pay, and this helps us subsidise the treatment of those who cannot," says Dr Badwe.

That's where the question of trust comes in, says Dr Prasad. If better-off patients fund their own treatment, through insurance policies or otherwise, it can help the hospital minimise costs for those who really need help, achieve sustainability, and focus on improvement in innovation and care.

But a hospital seen as a facility only for the underprivileged will not attract well-off patients (who might gravitate to a private institution). "However, if we can show them that we offer a uniformly high level of care for all patients, rich or poor, it will bring the well-off people too. They have to trust that we will keep our promise, and that's certainly one of the things we are working hard towards," adds Dr Prasad. ■

Nursing staff at SVICCAR in Tirupati, Andhra Pradesh

Sturdy in support

The Tata Cancer Care Foundation and the Assam Cancer Care Foundation are the custodians of the Tata Trusts' countrywide cancer initiative

What is common to a thickened, coagulating *dal* (lentil) and breast cancer? The answer lay in a campaign — Gaanth Pe Dhyaan, which loosely translates as 'mind the knot' — launched by the Tata Cancer Care Foundation (TCCF) in 2023 to promote cancer prevention through early detection. It urged women to watch out for lumps, both in their dishes and their breasts.

The campaign aimed to raise awareness about cancer by connecting with women through cooking, which is still their preserve in India. Outreach efforts of the kind are part of the programme spread at TCCF, a Tata Trusts initiative primarily tasked with providing cancer care in areas where it is not available. TCCF does this by establishing and supporting hospitals and facilities for diagnosis and treatment.

"Our goal is to set up good cancer hospitals in regions or states where there are no comprehensive cancer facilities available under one roof," says Dr Kailash Sharma, head, clinical services, training and education at TCCF. "Our hospitals run on a nonprofit basis and offer subsidised care for those who cannot afford it. The long-term objective for these hospitals, though, is to achieve financial self-sustainability."

The TCCF directly operates two hospitals: the Sri Venkateswara Institute of Cancer Care and Advanced Research in Tirupati, Andhra Pradesh, and the Ranchi Cancer Hospital and Research Centre in Ranchi, Jharkhand, both of which deliver a comprehensive range of cancer care services.

The TCCF has expansion plans for the Ranchi and Tirupati hospitals. They will each get a new 100-bed building, and a place within their campuses for patients (and their families) to stay for the treatment duration.

TCCF also provides support to a host of other facilities in various ways, from providing funds, equipment and trained staff to enabling donations and grants for day-to-day operations.

The supported centres include the Mahamana Pandit Madan Mohan Malaviya Cancer Centre in Varanasi, Uttar Pradesh, the Homi Bhabha Cancer Hospital, also in

Varanasi, the Meherbai Tata Memorial Hospital in Jamshedpur, Jharkhand, and the Yenepoya Cancer Center in Mangalore, Karnataka.

Training programmes are an essential element of TCCF, given the need for top-notch professionals to run its extensive network of facilities. An example is the Foundation's fellowship programme to train oncologists, pathologists and other specialists.

The graduate fellows from the programme have been placed in the TCCF hospitals at Tirupati and Ranchi, and in the smaller centres in Assam and Chandrapur, in Maharashtra. "The fellowship programme meets our needs and the standards of cancer care in remote and developing centres," adds Dr Sharma.

(above) **A training** session for government health workers in Jharkhand; **laboratory technicians** at the Homi Bhabha Cancer Hospital in Varanasi

Data-driven coverage

Hospital locations are determined by the prevalence and type of cancer in a particular area and the resultant requirements. "The setting up of a hospital is a data-driven decision to ensure coverage for common cancer types in the population," says Dr Sharma. "The emphasis is on infrastructure development, capacity building, training and sustainable operations.

"Collaboration with government agencies and other foundations plays a crucial role in ensuring a patient-centric approach, which includes accessible cancer treatment across underserved regions."

In Northeast India, that objective is met by the Assam Cancer Care Foundation (ACCF), a collaboration between the Tata Trusts and the Assam government. Established in 2017, ACCF runs the impactful 'distributed cancer care model' (see *The pyramid rises* on page 8), a multitiered care delivery system that comprises an apex hospital and step-down services at smaller facilities connected to it.

In Assam, poor healthcare and travel infrastructure put a considerable financial strain on patients and their families. These patients are prone to discontinue their treatment midway when the going gets difficult. "Loss of follow-ups is happening a lot because of this financial burden," says Dr Jai Prakash Prasad, ACCF's chief operating officer.

The distributed model's four-level structure and its robust referral system have managed to stem the treatment stoppage,

Cancer survivors at a State Cancer Institute event in Guwahati

Campaign trail

The Tata Cancer Care Foundation (TCCF) and the Assam Cancer Care Foundation (ACCF) have run a clutch of campaigns to spread the word about cancer, and to support patients and families in the fight against the disease.

- **Gaanth Pe Dhyaan**: Launched by TCCF in October 2023, the campaign tries to increase awareness about the importance of early detection of breast cancer. It employs a powerful metaphor (that of lumpy cooking) to connect with women across the country.
- **Khud Se Jeet:** This TCCF campaign targets cervical cancer, aiming to alert women that it is preventable and curable if caught early through routine screening.
- **Survivors programme:** Recently launched by ACCF, the initiative aims to put survivors and former patients in touch with those undergoing treatment. The intent is to minimise the fear surrounding cancer and inspire confidence in the treatment being provided.

particularly where subsidised accommodation and food and ambulance services are provided by the attached facility.

"The model has found such success that the Indian government has written to all state governments to explore if they can replicate it in their geographies," says Dr Prasad. Two teams, one from Maharashtra and another from Tamil Nadu, have visited Assam to learn more about this, as well as a nine-member team from the Himalayan kingdom of Bhutan.

"It was so heartening to know that others want to try this out," says Dr Prasad. "If your dream is to provide an effective model of cancer care, this would undoubtedly be it."

Confidence building

"One component we are looking to have at every hospital is a survivors group or NGO," says Dr Rajendra A Badwe, ex-chief executive of TCCF and a former director of Tata Memorial Centre, Mumbai. "When a patient meets someone who has survived cancer for five or 10 years, and is healthy and doing well, it infuses confidence."

ACCF already has this in place with a survivorship programme at many of its hospitals. Former patients are invited to interact with those undergoing treatment and allay their fears and concerns. "We hope this will make patients less afraid and less likely to hide their cancer," says Dr Prasad. "It will also help save lives."

That, in the final reckoning, is what TCCF and ACCF are all about. ■

Alliances aplenty

Partnerships across the spectrum have been a critical component of the Tata Trusts' endeavours in cancer care

When Majid Gohain, a resident of rural Assam, was diagnosed with cancer in 2019, he struggled to get cancer care. The closest comprehensive cancer care hospital was in faraway Guwahati. It's better these days for Mr Gohain, who continues to battle the disease. He can visit the Dibrugarh Cancer Centre, 60 kilometres from his village, a facility born of a collaboration between the Tata Trusts and Siemens Healthineers, a global medical technology company.

Similar corporate partners include Pfizer and Federal Bank and the reason is simple. Partnerships with the private and the public sector have enabled the cancer care programme of the Tata Trusts to scale up and create a sustainable impact.

In Assam, for instance, the Trusts have joined hands with the state government to set up a network of 10 facilities under the umbrella of the Assam Cancer Care Foundation. In Maharashtra, the Trusts and the state government have come together to form the Chandrapur Cancer Care Foundation, which will presently be setting up a new facility to serve the region's tribal belt.

The corporate partnerships of the Trusts are aimed at pooling together collective resources to lift cancer care in India, particularly in underserved regions. Siemens Healthineers, for example, works to provide essential medical equipment and technology in Assam, while the Trusts focus on infrastructure development and programme implementation.

The Trusts' collaboration with

The Mahamana Pandit Madan Mohan Malaviya Cancer Centre in Varanasi

pharmaceutical major Pfizer concentrates on community screening for oral, breast and cervical cancers, training frontline health workers, and raising awareness about risk factors. The partnership has reached more than 550,000 beneficiaries in three years. Another notable corporate engagement is with Federal Bank (see *A safety net to cut costs and suffering* on page 23).

The legacy endures

In the public sector, the Trusts have long been a solid backer of the Tata Memorial Hospital (TMH), India's foremost cancer care and research establishment. This is a legacy that stretches back to 1941, when TMH was established by the Sir Dorabji Tata Trust (the hospital's management shifted to the Department of Atomic Energy in 1962).

Another critical partnership is with the Indian government's National Cancer Grid (NCG), a network of some 360 cancer centres, research institutes, patient groups and professional organisations in India and abroad. NCG's mandate is to establish uniform standards for cancer patient care, provide specialised oncology training, and foster collaborative cancer research.

Established in 2012, NCG has found a steady supporter in the Trusts. Among the largest cancer networks in the world, it covers nearly 60% of all cancer-diagnosed patients in India. The Trusts are part of select initiatives of the Grid, and the impact of the collaboration continues in various aspects. "The Trusts have been actively involved with NCG, especially in its initial years. It is a natural partnership," says TMH's Director, Dr CS Pramesh.

NCG is unique in many ways. One of the more striking outcomes emerging from it is the cost of cancer drugs. NCG's heft and numbers enable it to pool resources and minimise the price of procuring high-value and high-volume oncology and supportive-care drugs.

The bulk buying yields an average of 85% in discount on the cost of medicines, which is passed on to member hospitals, eventually leading to patients getting access to affordable treatment and care.

Along with TMH, the Trusts have worked to set up or upgrade cancer facilities. One such example is the Mahamana Pandit Madan Mohan Malaviya Cancer Centre in Varanasi, which was built entirely by the Trusts and then handed over to TMH. "Where routine government processes can be time-consuming, the Trusts bring speed in execution with their expertise and resources," says Dr Pramesh.

Another sphere the Trusts have paid attention to is the funding of patient care. Specialised training in oncology is yet another contribution by the Trusts to enhance India's cancer care ecosystem. The Trusts also support cancer research, as with the breakthrough CAR T-cell therapy, which typically costs $500,000 in the West.

"We were able to develop the same at one-tenth the cost, and the initial phase of the research was funded by the Trusts," says Dr Pramesh. "If it weren't for their support, we would not have it in India."

By joining hands with stakeholders across the cancer care spectrum, the Tata Trusts have played a substantial role in providing affordable and accessible cancer care to the poorest of the poor in India. ■

A file picture of the Tata Memorial Hospital in Mumbai

Creating the core

Centres and institutions that provide affordable and high-quality treatment are central to the cancer care initiatives of the Tata Trusts

It was October 2022 and the back pain and breathing trouble had got so bad that Subamma P (name changed) could no longer manage her daily chores. A local physician, suspecting the worst, recommended tests at the then newly inaugurated Sri Venkateswara Institute of Cancer Care and Advanced Research (SVICCAR) hospital in Tirupati, the temple town in Andhra Pradesh near where Ms Subamma lived.

A detailed diagnosis confirmed that Ms Subamma had lung cancer. That was the bad news, but good tidings were on their way. Thanks to a customised treatment protocol and the best of care, Ms Subamma started recovering, and quickly. Her progress was so remarkable that within a couple of months she was rid of her pains and back in charge of her home. That Ms Subamma could count on SVICCAR was crucial.

Affordability and quality of care are the defining features of SVICCAR, established by the Tata Trusts at a cost of about ₹1.8 billion on a land parcel contributed by the Tirumala Tirupati Devasthanams (the trust that manages the famous Tirumala Venkateswara Temple). Spread over 156,000 square feet, it is one of the most advanced cancer hospitals in the region, with high-tech equipment and an expert staff that can cater to about 5,000 patients every year.

Members of the nursing team at the Ranchi Cancer Hospital and Research Centre in Ranchi, Jharkhand

SVICCAR is a stellar example of one of the more remarkable and understated aspects of the Tata Trusts' efforts in cancer care and treatment — seeding and fostering a slew of cancer facilities across India.

The cancer care thrust of the Trusts got a fillip with the setting up of the Tata Cancer Care Foundation (TCCF) in 2017. The Foundation's objective is to help ensure affordable, high-quality cancer care to millions of Indians closer to their homes. "The intent is to set up good cancer centres in places where there are no such facilities," says Dr Kailash Sharma, head, clinical service, training and education at TCCF, and a veteran with over 35 years of experience at the Tata Memorial Hospital (TMH) in Mumbai.

The need for a robust ecosystem that addresses cancer is evident. India reports more than 1.4 million cancer cases a year, with one in nine Indians likely to develop cancer in their lifetime. There is a huge need for diagnostic and treatment facilities as close as possible to where cancer patients live.

To this end, the Trusts' cancer care programme supports a dispersed network of facilities. Since 2017, cancer hospitals have been set up and supported in multiple states

under the programme, in Andhra Pradesh, Assam, Jharkhand, Karnataka, Maharashtra and Uttar Pradesh. That is in keeping with a concern that dates back to 1941, to the establishment of India's first and best-known cancer centre, TMH in Mumbai.

In 2011, the Tata Medical Center (TMC) was founded in Kolkata. Created by the Tata Trusts, with contributions coming in from Tata companies as well, the 437-bed TMC addresses the dire requirement for top-notch and equitable cancer care in a region sorely lacking such a facility. Post an expansion completed in January 2019, it is now better placed to cope with an unending rush of patients.

In Assam, the Trusts have gone deeper with a distributed cancer care model spread across the state, with 10 cancer centres on board under the Assam Cancer Care Foundation, which operates as a partnership with the state government.

Screening spread

A pillar of the Trusts' cancer ecosystem is screening to improve community outreach and cancer prevention. This is managed through screening kiosks, at hospitals and elsewhere, to maintain a registry of patients and to track the disease at the community level.

The bigger institutions are the key, for sure, among them the Ranchi Cancer Hospital and Research Centre (RCHRC) in Ranchi, Jharkhand. Now a 100-bed facility, RCHRC was set up by the Tata Trusts and began functioning in 2022 and has reached more than 55,000 patients thus far, while also screening 258,000 people for common cancers.

Jharkhand is home to one more significant cancer facility, the 130-bed Meherbai Tata Memorial Hospital in Jamshedpur. Established in 1975 and managed by Tata Steel, the facility was upgraded to a full-fledged cancer centre by the Trusts in 2018.

In Varanasi, the Trusts — along with TMH, Mumbai — have worked with the Banaras Hindu University to set up the Mahamana Pandit Madan Mohan Malaviya Cancer Centre. Also in Varanasi is the Homi Bhabha Cancer Hospital, a former Indian Railways hospital that was upgraded by the Trusts. This now specialises in child cancers and bone marrow transplants.

In Maharashtra, there are several facilities supported by the Trusts in and around Mumbai, many of them connected to TMH. In Chandrapur, the Trusts-backed Chandrapur Cancer Care Foundation is collaborating with the state government to build a 140-bed facility. "There are a large number of cases and no suitable hospital in this tribal-dominant area," explains Dr Sharma.

There are other, smaller, components in the Trusts' canopy of cancer care. In Mangalore, Karnataka, the Trusts have helped the Yenepoya Cancer Centre source and set up key equipment, and in Silchar, Assam, TCCF is setting up a nuclear medicine unit at the Cachar Cancer Hospital and Research Centre.

The centres and institutions established by the Tata Trusts are testament to the organisation's continuing commitment to improve India's cancer care ecosystem. ■

Built to last

The major cancer facilities that the Tata Trusts have helped establish…

- Tata Memorial Hospital, Mumbai
- Tata Medical Center, Kolkata
- Sri Venkateswara Institute of Cancer Care & Advanced Research, Tirupati, Andhra Pradesh
- Ranchi Cancer Hospital and Research Centre, Ranchi, Jharkhand
- Meherbai Tata Memorial Hospital, Jamshedpur, Jharkhand
- Mahamana Pandit Madan Mohan Malaviya Cancer Centre, Varanasi, Uttar Pradesh
- Homi Bhabha Cancer Hospital, Varanasi, Uttar Pradesh
- Chandrapur Cancer Hospital, Chandrapur, Maharashtra
- 10 cancer centres in Assam (Guwahati, Dibrugarh, Barpeta, Diphu, Silchar, Tezpur, Lakhimpur, Jorhat, Darrang and Kokrajhar)

The lady lives on

Established by Dorab Tata in memory of his wife, Meherbai, the Lady Tata Memorial Trust continues to support leukaemia research

Lady Meherbai Dorab Tata was a woman of personality and substance. Possessed of a rare intellect, she was a talented pianist and connoisseur of English literature, India's first woman Olympic athlete, the first Indian woman to fly in an airplane, and — perhaps most important — a champion for women's rights. The much-loved wife of Dorab Tata and daughter-in-law of Jamsetji Tata, the founder of the Tata group, Lady Meherbai Tata continues to live in the collective memory, and appropriately so.

The Lady Tata Memorial Trust (LTMT) was established by Dorab Tata in April 1932 in memory of Lady Meherbai, who succumbed to chronic myeloid leukaemia — an eminently treatable disease that today can be cured with an oral pill — in June 1931 in a nursing home in Wales at the relatively young age of 51.

LTMT has since its inception funded scientific research in blood-related diseases,

Dr Mammen Chandy is a former director of the Tata Medical Center, Kolkata

with a focus on leukaemia. Dorab Tata also established another trust in his beloved wife's name, the Lady Meherbai D Tata Education Trust, which enables Indian women graduates to pursue higher studies abroad.

Lady Meherbai was born in Bombay on October 10, 1879. She was educated at Bishop Cotton School in Bangalore when her family moved there following her father Hormusji J Bhabha's appointment as principal of Maharaja's College in Mysore.

An accomplished pianist

After passing her matriculation exams at the age of 16 and attending college for science classes, Lady Meherbai continued her education in her father's extensive library. A missionary lady was enlisted to supervise her reading in English literature and impart music lessons. The young Mehri soon became an accomplished pianist.

On February 14, 1898, Mehri married Dorab Tata, Jamsetji Tata's elder son and inheritor of his father's responsibilities as head of the Tata group. Dorab gifted his new bride the 245-carat 'Jubilee diamond', named after Queen Victoria's centenary anniversary. There's a story here that's more than worth telling.

Twice as large as the Koh-i-Noor, that complicated icon of colonial plunder, the Jubilee diamond was discovered in a South African mine in 1895 and acquired by a consortium of London diamond merchants. The consortium displayed the diamond at the 1900 Exposition Universelle in Paris, which is where Dorab Tata and Lady Meherbai purchased it for £100,000. Every time the Tatas removed the Jubilee diamond from their safe deposit vault in London for Lady Meherbai to wear, they were reportedly 'fined' £200 by the insurance company.

Lustrous as the donning of it may have been, the Jubilee diamond would serve a greater purpose for the Tatas: it was part of the jewellery pledged by Dorab Tata to the Imperial Bank when the Tata Iron and Steel Company – today's Tata Steel – was undergoing a crisis in 1924. The diamond was eventually sold following Lady Meherbai's demise, along with the rest of her jewellery, to set up the trusts in her name.

Dorab and Meherbai Tata with a group of British visitors in Jamshedpur

Women in similar circumstances may have been content to bask in the triumphs of her family and her position, but Lady Meherbai was made of different stuff. She put to good use the liberal education she had received, advocating the case of women in India and becoming one of the founders of the Bombay Presidency Women's Council as well as the National Council of Women.

Lady Meherbai was a crusader for the advancement of women's education, and for abolishing the purdah system and the practice of untouchability. Dorab Tata wholeheartedly supported his wife's interests, encouraging her to take charge of a local school in Bombay and transform it into a model institution.

Female education

Together, they brought in an expert from England to conduct a survey on the state of female education in India. This extensive survey took over a year and the resulting book, which documented the findings, became for many years the handbook provided by the Board of Education in Whitehall to all women inspectors before they made their way to India to promote higher education for girls.

Coming to LTMT and the yeoman service it renders, the Trust spends four-fifths of its income on international research. An 'international scientific advisory committee' based in London invites applications for awards of support grants for leukaemia research worldwide. These awards cover studies of leukemogenicity, and the epidemiology, pathogenesis, immunology and genetic basis of leukaemia and related disorders (including myeloma and lymphoma).

These awards are open to qualified investigators of any nationality. Priority is given to those intending to move to other centres to establish scientific collaboration between laboratories and/or progress towards scientific independence. The awards have been granted to researchers from all over the world, an example being David Hernandez Cruiz from Mexico, who received his DPhil from the University of Oxford, thanks in part to LTMT. The award enabled Mr Cruiz to pursue research on mutations in leukaemia, especially in children with Down's syndrome.

Meherbai and Dorab Tata in a photograph taken in Bombay

Another to benefit from LTMT's

Tata group founder Jamsetji Tata and his wife Hirabai (seated centre) with their sons and daughters-in-law (from left) Ratan Tata, Meherbai, Dorab and Navajbai Tata

support is Remi Safi, currently a postdoctoral research fellow at the Josep Carreras Leukaemia Research Institute in Barcelona, Spain. This is what she had to say about the LTMT grant, which she received in the 2022-23 award cycle: "I started a 'high-risk' project aiming to decipher — for the first time — the role of lipid droplets in acute myeloid leukaemia.

"While the project has yielded promising data, more time is needed to finalise our findings and publish impactful results. In the meantime, I have published two peer-reviewed papers in the lipid droplets field... The fellowship secured my stay in top-notch laboratories and has equipped me with the skills to address significant research questions, provided training in scientific grant writing, and enabled me to establish my own research niche.

"Securing the Lady Tata Memorial Trust grant provided me with an exceptional opportunity to receive the prestigious Marie Sklodowska-Curie Postdoctoral Fellowship. I am currently in the second year of this fellowship, which has been an enriching experience."

LTMT offers one-fifth of its income to scholars doing scientific investigations in Indian universities and institutes into diseases of the blood — with special references to leukaemia — and for scientific research in the alleviation of human suffering from the disease. The awards offered are for post-doctoral fellowships (two-year term) and junior scholarships (five-year term leading up to the senior scholarship and doctoral studies).

Numerous institutions, for research and for medical treatment, have received grants from LTMT and this has helped enormously in the further investigation of leukaemia and in allied research.

The Trust's budget estimate for 2024-25 is ₹114.7 million (11.47 crore). This may be smaller than the contributions of the bigger Tata Trusts to social causes, but there is no doubt about its value. LTMT has encouraged young researchers all over the world to take up the challenge of finding out the reasons why blood cancer develops, and to develop therapies that can combat it. Lady Meherbai Tata would surely be a supporter of such backing. ■

Cancer survivors and hospital staff at an event hosted by the Barpeta Cancer Centre in Assam

A safety net to cut costs and suffering

Cancer patients at Tata Trusts-supported hospitals in Assam and Andhra Pradesh have been provided a lifeline by Federal Bank's funding for diagnosis, treatment and more

Ramendra Biswas had a niggling problem in his throat, but the 70-year-old from Lakhimpur district in Assam didn't give it much thought. Then, shortly after, Mr Biswas found it difficult to swallow and investigations revealed he had cancer. More tests followed before he was recommended for surgery at the State Cancer Institute (SCI), the nodal hospital 350km away in Guwahati. It was proving all too much for Mr Biswas.

Expenses for diagnostics and initial treatment had crossed ₹60,000 and there was the surgery cost to come. Financially dependent on his son, a daily-wage labourer, Mr Biswas reckoned he had no option but to forgo further treatment. Then a chance visit to his house by the community outreach team from the local Lakhimpur Cancer Centre changed — and saved — his life.

The team told Mr Biswas about a 'beneficiary support fund' provided by

Federal Bank for cancer patients in the region. That covered his costs for diagnosis, treatment, and follow-ups, as well as travel and accommodation. "I had given up hope but the financial assistance enabled the completion of my treatment," says Mr Biswas. "It made me feel I was not left alone to fight against this disease."

The help that Mr Biswas received from the Federal Bank fund was routed through the Assam Cancer Care Foundation (ACCF), established in 2017 as a collaboration between the Tata Trusts and the Government of Assam. Federal Bank has been a generous contributor to ACCF, supporting a partnership that benefits the neediest cancer patients in Assam.

"No amount of motivation can bring cancer patients to the hospital if they feel they cannot afford the treatment," says Dr Debashish Shome, ACCF's operations and planning manager. "We try to ease the financial worries of patients with the beneficiary fund."

Critical backing

With SCI as its hub, ACCF manages a network of nine hospitals in Assam. Backing from entities like Federal Bank has been a boon for the Foundation. Federal Bank has also been supporting the Tata Cancer Care Foundation (TCCF), established by the Tata Trusts to manage a network of cancer care facilities across India.

Among these is the Sri Venkateswara Institute of Cancer Care and Advanced Research (SVICCAR) in Tirupati. This was set up by TCCF in collaboration with the Government of Andhra Pradesh and the Tirumala Tirupati Devasthanams. The necessity for such facilities is acute.

Says KVS Manian, chairman and managing director of Federal Bank: "The most obvious idea is to provide funding for treatment, but there are some aspects of cancer care that are not covered by government or insurance schemes, aspects that are not claimable."

This means providing diagnostic support for the early and accurate detection of cancer, as well as its confirmation through molecular pathology tests, biopsies, and advanced imaging. Additionally, there's support for transportation and accommodation for patients and their caregivers. These expenses have to be borne by patients.

The average cost of comprehensive cancer treatment in private hospitals — including diagnostics, surgery and radiotherapy — ranges between ₹500,000 and 600,000. For those undergoing targeted therapy, six cycles of chemotherapy can cost as much as ₹80,000. These expenses, which are increasing all the time, place enormous financial pressure on patients and their families.

"Pre-diagnostic tests or minor, invasive surgeries for investigation in a city like Guwahati may cost upwards of ₹15,000," adds Dr Shome. "This sort of expenditure is unaffordable for many patients." That can lead to delayed diagnoses, high treatment dropout rates and poor health outcomes. It also leads to late-stage detection and significantly reduced chances of survival. An estimated 70% of cancer cases in India are diagnosed at an advanced stage, where treatment is more complex and costly and outcomes are often poor.

At SVICCAR in Tirupati, the Federal Bank fund serves several purposes. "The bank has left it to us to utilise the funds as we see fit," says Dr Prasanth Penumadu, the hospital's medical director. "The fact that most government or public insurance schemes do not provide coverage until a cancer diagnosis is ascertained stops patients from coming to us."

Supportive care is another area where patients are not compensated. This refers to problems related to cancer treatment:

post-operative complications, delayed side effects, etc that become evident only later. For example, a patient who has completed cancer treatment may return two months after the last procedure with an incisional hernia arising from surgery.

"We use donor funds from corporates like Federal Bank to offer such cancer treatment-related procedures free of cost," adds Dr Penumadu. "In 2023-24, SVICCAR aided about 200 supportive-care beneficiaries. Some general hospitals may offer coverage for post-surgery procedures, but they are often reluctant to take on cancer patients or treat post-chemotherapy complications."

This promise of affordable and quality treatment, alongside SVICCAR's stellar reputation, attracts patients from near and far. M Nagaraju, a 38-year-old daily labourer from Nellore district in Andhra Pradesh, was diagnosed with an endobronchial mass — a malignant growth located in the airways leading to the lungs — that needed to be removed urgently.

Funding support

The initial investigations were done at a Nellore hospital but Mr Nagaraju could not afford the cost of the operation there. He was referred to SVICCAR, where further investigations and treatment were funded by the Federal Bank grant.

With more beneficiary funds coming in, SVICCAR has extended its funding support to special investigations as well. Most pathological tests are conducted in-house and are, therefore, free for patients. But some require an intervention from a distant centre. These cost the patient an additional ₹5,000-6,000. Thanks to Federal Bank, these are now provided free of cost.

Dr Penumadu believes palliative care systems, especially home-based palliative care, would be a big help. "Funds for manpower and travel logistics, since you need someone to visit the patient's house regularly, would be very useful," he says.

A nurse collecting blood from a patient at SVICCAR in Tirupati, Andhra Pradesh

As the head of a hospital-cum-academic institute, Dr Penumadu would like to see some part of the Federal Bank aid going towards further cancer research. "This would directly and indirectly benefit patients because you never know what breakthrough is around the corner."

Topping the wish list at the centres in both Andhra Pradesh and Assam is accommodation for patients and their caregivers. For patients coming from far away, finding a place to stay while under treatment is a big challenge, even if this is already being funded. Radiation therapy, for example, typically runs for four to six weeks and requires patients to come in every day for a few hours.

SVICCAR's patients have access to a free-of-cost guesthouse — also paid for by a corporate donor — many miles away from the hospital, but shuttling back and forth every day in a hospital bus can take its toll. Such lodgings would be a one-time expenditure for the donor, and could go a long way in helping patients.

Regardless of whether future funding can address these issues, Dr Penumadu says Federal Bank's aid has had a tremendous impact. "Every penny they have contributed has made a difference to the lives of our patients," he says. ■

‘A good partner is a necessity’

Federal Bank has been providing stellar support to the Tata Cancer Care Foundation and the Assam Cancer Care Foundation, both founded by the Tata Trusts, to help economically disadvantaged patients suffering from cancer to cover the costs of diagnosis, treatment and much more. Managing director and chief executive **KVS Manian** talks to Labonita Ghosh about Federal Bank’s commitment to cancer care and about the partnership with the Tata Trusts.

How did Federal Bank’s association with the Tata Trusts come about?

The Tata Trusts had collaborated with us in 2023 as a knowledge partner for our initiative ‘Sanjeevani United Against Cancer’. Cancer, as a cause, is very important to the Bank, and it’s also close to my heart since I have suffered a personal loss from the disease.

We understand how difficult and expensive cancer treatment is, especially for those from economically disadvantaged sections of society. Awareness is equally important in India, where early and timely detection often doesn’t take place. We wanted a more holistic and comprehensive involvement, which is why we got going with patient support.

Patient support is a challenge in itself. Not only do you require a good partner to ensure optimum utilisation of funds, but there are hidden costs that are not claimable by patients through insurance or government schemes. We realised that if we focus on these things, the partnership would be more fruitful. After awareness and patient support, we are exploring the option of funding infrastructure of various kinds, whether it’s a cancer centre in regular hospitals or accommodation for caregivers.

One abiding memory I have is of seeing, many years ago, a lot of people on the footpaths outside the Tata Memorial Hospital in Mumbai. That’s why we would like to create a space for caregivers as well. More such ideas will emerge in the course of our partnership with the affiliates of the Trusts such as the Tata Cancer Care Foundation [TCCF] and the Assam Cancer Care Foundation [ACCF].

From awareness and advocacy to creating infrastructure, how did that transition happen? And is it easy to put funds where the outcomes are not immediately evident?
CSR [corporate social responsibility] has made a lot of companies think more about how to spend their mandated 2% of funding. For a bank like ours, whose profits are more than ₹4,000 crore in 2024-25, 2% is a substantial amount.

Earlier, we were more inclined to fund smaller projects. But the effort to spend money on multiple small projects is complicated, we have found, which is why we are now backing larger initiatives instead. I believe that for corporate entities the mandated CSR spend is an opportunity to look at large programmes that can have a more significant impact.

For a family threatened by the loss of a loved one due to cancer, a small amount can have a huge impact. But creating infrastructure could magnify that impact and make it more widespread. This was not a difficult transition for an organisation such as ours.

Many companies prefer to use CSR funds in their catchment area or in the areas where they operate. You have moved from working only in South India to Assam. What made you go beyond your comfort zone?
It's not entirely true that we went out of our comfort zone; Federal Bank has a reasonable presence in the Northeast as well. I believe that once you decide to back a cause, you must go where the cause takes you. Having said that, it's natural for us to work in territories where we are present because that's where our customers are, where we know the market and the terrain, and can make an impact. Our 2% is not meant as a business expenditure; in that spirit, we do not want to be constrained by geography.

Doctors at SVICCAR in Tirupati exchange notes prior to a surgery

Federal Bank's Hormis Memorial Foundation does a lot of work in climate change, sustainability and education. Why did you decide to support cancer, too?
Healthcare is a big commitment for us. It is there in the Foundation's mandate and Covid sharpened our focus on health and wellbeing. Then, after Covid, when we started wondering about the next big area that could do with some funding, cancer was the obvious answer.

How has your experience of the partnership with the Tata Trusts affiliates TCCF & ACCF been?
When you embark on a journey of funding, it's very important to have the right partner. By law, we are supposed to spend our CSR money in an auditable manner. But that is just one part; the other is about the

genuineness of that spending, of it reaching the right people and real objectives being met. A good partner is a necessity to achieve these goals.

From our point of view, TCCF and ACCF are reliable and trusted names. It's a pleasure being associated with the Trusts; you don't have to worry about whether the money is being spent correctly. I have some personal experience with the Tata group as well, having worked with it for about eight years of my career.

Have there been any unexpected outcomes of this partnership?

When we decided on patient support, there was a lot of learning. It has helped us become more focused on what we would like to do. We understood what could be easily funded and what the hidden needs that require support are.

At the start, the most obvious idea is to provide funding for treatment. But the truth is that some aspects of cancer care are supported and covered by government or insurance schemes. The real need is somewhere else, in aspects that are not claimable. For instance, the blanket term 'patient support' entails many aspects that are not immediately evident.

Our funding has gone towards transport [enabling patients to access cancer care centres near and far] and accommodation for patients and their caregivers. Some of the money has gone into the nutrition needs of patients. These are not things that were obvious to us at the start. As the partnership evolved with the programme, we have learnt how to use the money more effectively and find the gaps where funding can make a difference.

Where do you see this partnership going?

The next stage, to my mind, is infrastructure. Federal Bank is in talks with some government hospitals to set up oncology centres on their premises, perhaps even provide infrastructure support for specific kinds of oncology. I feel we could do some work in this sphere with the Trusts as well.

Beyond compliance and the financial angle, what makes a CSR intervention successful?

The biggest challenge is to measure impact. One can carry out assessment studies but not all outcomes are clear and easy to measure. For example, with cancer care you don't know how many lives you have been able to save. These are difficult facets to grapple with, which is why good partners and well-designed programmes are critical.

The effectiveness of a programme is vastly different from whether or not it is auditable. The true north for all of this is selecting the right partner, one who shares your values and commitment to the cause, and can also contribute with a well-designed programme.

When scaling a programme you're involved in, how do you educate yourself to know the different directions you can go?

Necessity is the mother of invention. As our needs grow to deploy more CSR funds, our teams are also exploring more opportunities. Second, when working with partners like the Trusts, a lot of thoughts and ideas come from them, too, especially since they are already a part of the ecosystem. You then work on these ideas collaboratively.

Third, when it comes to our cancer programme, a lot of ideas are generated by patients and other stakeholders in the system. They give us insights into what more can be done and what is essential. You must keep all these channels open.

At Federal Bank, we now want to narrow our focus areas and spend more on those. Do fewer things, perhaps, but go deeper into them for more impactful outcomes. This will help us to become more focused and generate ideas about new initiatives to pursue.

A short-term impact is providing funds to a family that needs money on a day-to-day basis to treat its near and dear ones. But investing in infrastructure [that benefits a lot of cancer patients] can create a long-term impact. Increasingly, we're thinking of doing fewer projects but going much deeper into them. As our budgets grow, so will our challenges.

In this context, one always needs a good partner, someone who can scale up when provided with funds and an enabling environment. Most on-ground partners are tied to the geographies they work in, so it's harder to initiate country-wide programmes with them. Here again, the Tata Trusts are a perfect fit since they operate all over India. ■

A practice session for the fellows at their base in Mananthavady in Wayanad district

Song sung true

Tribal musicians are at the heart of a remarkable fellowship programme in Kerala that celebrates their culture and heritage

Surag Sankaran is done with being a daily-wage labourer. A pathway once unclear has opened up before him and the 23-year-old native of Panavally village in Kerala's Wayanad district is hitting the high notes. "I'm living my dream; this is going to change my life," he says.

Mr Sankaran's upbeat outlook about what the future holds is down to being part of the Earthlore Fellowship, a year-long pilot programme designed to promote traditional tribal music and hone the talent of tribal musicians. Music is the centrepiece here and there's space as well for training in theatre, soft skills and more in what is an exhilarating blend of collaborative learning and sharing.

Set up in April 2025 by the Archival and Research Project (ARPO), a Kochi-based nonprofit — and with steadfast support from the Tata Trusts to count on — the fellowship has blossomed even as it has evolved. In its fold are 18 tribals from Wayanad and neighbouring Coorg district in Karnataka, men and women in about equal numbers and ranging in age from 18 to 38. Also in the pool are two non-tribal musicians.

For the tribals in the group, music was previously more of a passion than a craft formally studied. That did not make them lesser musicians. Homemakers, students, autorickshaw drivers and daily wagers like Mr Sankaran among them, they are naturals in matters of music, steeped in stories of tribal culture and heritage, ever willing to celebrate the community spirit through song and dance.

Absorbing the finer facets of music has been a boon for the tribal fellows, many of

The programme has fostered a sense of togetherness among the participants

whom perform with local music troupes. A singer and instrumentalist from the Kattunayakan tribal community, Mr Sankaran took a while to jell with the programme and the people in it. "It was a bit difficult at first for me but then I began to bond with the other fellows. Music was the glue," he says. "With our songs and our stories, it feels like a family now."

A better beat

For Aparna Raj, a 23-year-old graduate student from Sulthan Bathery in Wayanad, the fellowship has been a revelation. "I'm a singer in a 25-member troupe but I never really thought much about tempo, rhythm or pitch while performing. I know better now," she says.

Hailing from the Paniya tribal community, Ms Raj came into the programme not knowing what exactly was in store. "I thought we would learn about the songs and instruments of different tribal communities, but this has been something else, something more," she says. "There's such a sense of togetherness."

The programme offers comprehensive training by domain experts in traditional and contemporary music, with a range of elements coming into the frame: vocal techniques, percussion and string instruments, songwriting, composition and orchestration. 'Training' may be a misnomer in the context. What the fellowship has done best is fashion a creative communion — between tribals and non-tribals, learners and instructors — in tribal music and tribal lore.

This cross-cultural exchange is central to an effort where camaraderie has fostered a feeling of belonging in an environment of equals. The programme itself is structured to make that possible. There are 12-day monthly sessions when all the fellows come together at Mananthavady, their base in Wayanad, and regular monitoring and feedback mechanisms.

Beyond the musical, the Fellowship includes an array of components: acting, soft skills, language proficiency,

sociopolitical awareness and an understanding of the music industry. Not least, it provides a monthly stipend of ₹15,000, serious money for quite a few of the fellows.

All of this has left a lasting imprint on Rajalakshmi Villamparambil Sarojini, a 30-year-old fellow from the Kurichiya tribal community. "When we started it was just music, singing and instruments. Then it grew a lot bigger," she says. "I'm so grateful to be here. This will help me make a career in music."

The fellowship lives up to its name, says Parvinder Singh, one of the two non-tribals in the programme. "I have made such a wonderful connection with all of the fellows," says the Nagpur-based multi-instrumentalist – he crafts instruments as well – whose speciality is the Swiss-origin handpan. "I don't understand their language but we can speak through music. That's the truest emotion, the connection we have made."

"This is different"

The 38-year-old Mr Singh, a self-taught musician who has performed professionally in India and abroad, has had the experience of meeting tribal musicians in Maharashtra and Chhattisgarh. "This is different," he says. "I was fortunate to be selected for what I think is a great opportunity. It has made me more aware of tribal artists and tribal music, and about myself. The words they use to describe nature and their culture, the way they sing – it gives me goosebumps."

Rishabh Nair, the other non-tribal in the ensemble, says being in the programme has been a godsend. "I wanted in the moment I saw an online post inviting applications," says the 33-year-old Bengaluru-based singer, songwriter and composer. "My application was accepted, but then it was like jumping into a black box; I had no clue how it was going to turn out."

Ajitlal Shivlal points the way during an acting session with the fellows

The secret sauce

What does the skill of acting have to do with being a better musician? More than a bit, it seems, especially when they can be combined to create something superior. Incorporating theatre and acting in its music-focused repertoire has done just that for folks in the Earthlore Fellowship initiative.

Bringing acting into the blend has been an enabler for the programme in multiple ways, enhancing the stage presence of the fellows, building their self-confidence and nurturing in them the ability to narrate stories of their culture and traditions to telling effect.

That would not have come as a surprise to Ajitlal Shivlal, the Kochi-based actor and theatre person tasked with conveying to the fellows what acting is about. "The talent of these tribal musicians is obvious," he says. "All I've tried to do is see what comes from them and structure that to their advantage."

Mr Shivlal is far from considering himself a conventional tutor. "I'm learning from them as much as I'm 'teaching' them. And they are a fantastic lot: transparent, open-hearted and curious."

Whether in theatre or in a concert, a strong stage presence is of primary importance, says Mr Shivlal. "There are some basic techniques of the stage that I have shared with the fellows. After all, beyond singing, you are performing your songs."

Ratheesh Puludokhi, a 27-year-old daily wager from Noolpuzha village in Wayanad, endorses that. "With acting, you have to shed your inhibitions," explains Mr Puludokhi, a fellow from the Paniya tribe. "And that helps with your song and your dance." ■

It has turned out perfectly well for Mr Nair, who has made the transition from outsider to group insider more harmoniously than he could have hoped. "There was no introduction session, no formal breaking of the ice between the fellows. It was all so open-ended; we just figured out on our own who is who and what is what. It was the music and the conversations around it that brought us together. The programme affords us a safe space to share our stories and our ideas."

The fellowship will surely contribute to enriching tribal music, which has had its moments in the sun lately. An example is Nanjiyamma, who belongs to the Irula tribal community, winning a national award for the heartwarming *Kalakkatha*, which she sang and co-wrote for the Malayalam movie *Ayyappanum Koshiyum*. Yet tribal music and musicians remain largely discounted, reflecting a wider reality for tribal communities, still frequently at odds with the state, its systems and regulations.

ARPO, the force behind the fellowship programme, has played a stellar role in championing the tribal cause in Kerala, home to 37 tribal communities. Since its inception in 2021, the organisation has documented the oral and material history of tribal communities and sought newer avenues to showcase their art and culture.

The genesis of the programme was the interactions that Sruthin Lal, ARPO's co-founder, had with tribal communities. "I was fascinated by their music and their instruments," he says. "We had the idea of an initiative in tribal music but we were unsure where to start, and we struggled to raise the necessary resources. Then the Tata Trusts came in with support and things began to fall into order."

The fellowship has facilitated a cross-cultural exchange between the tribal and non-tribal musicians involved

Out with hierarchy

ARPO's intent with the fellowship has been to create a model shorn of hierarchy, where the tribal musicians involved can express themselves and their talent. "That's why we don't have the typical teacher-student relationship, no non-tribal and tribal differentiations, and nobody judging anybody," adds Mr Lal, himself a trained classical musician.

"Establishing trust [with the tribal musicians] was a challenge," says Parvathi Asok, ARPO's co-founder. "We were conscious from the very beginning that we should not in any way be exploiting them. It's not like we think we are saving them or teaching them to be musicians. We are focused on enabling them to stay rooted in their culture, to be proud of it, to sharpen their skills so that their stories and their traditions are portrayed to the world."

The sensitivity in the design of the programme follows a similar thread. "We didn't want the fellows to feel they were being 'taught' something; that would have harmed the purpose of the fellowship," explains Ms Asok. "What we are showing

Trainer Vivieck Rajagopalan, a composer and percussion artist, with the fellows

them are the possibilities and the varied music genres out there. We see ourselves as facilitators in a cultural exchange."

From the Tata Trusts' perspective, the fellowship aligns with one of the principal objectives of their art and culture portfolio: to support marginalised and underrepresented artists and art forms. "This initiative has been implemented with a lot of care," says Paroma Sadhana, a programme manager with the Trusts. "The ARPO team has designed a format that relies on open communications between the tribal and non-tribal fellows and the trainers. There's no top-down teaching here."

The fellowship is slated to culminate with a musical production themed on the environment and climate change, issues of deep concern to tribal communities. To be staged initially in Kochi — there are plans to take it to other metros as well — the musical will feature nine original compositions by the fellows and a storyline that all of them have contributed to in some measure. It promises to be a blast.

Looking ahead, the fellows can rely on ARPO's commitment to helping them further their musical careers. "They have the potential as individuals to do well, and even greater potential if they remain a collective," says Mr Lal. "My vision is for this group to reach a level where we are not needed, to become global ambassadors of their culture and their people."

Meanwhile, ARPO has set its mind on carrying the fellowship programme forward, making it a permanent affair that takes in musicians from other tribal communities. Prominent on the organisation's wish list is an institution with its own infrastructure and space. That would be sweet music, for tribal communities as much as for ARPO. ■

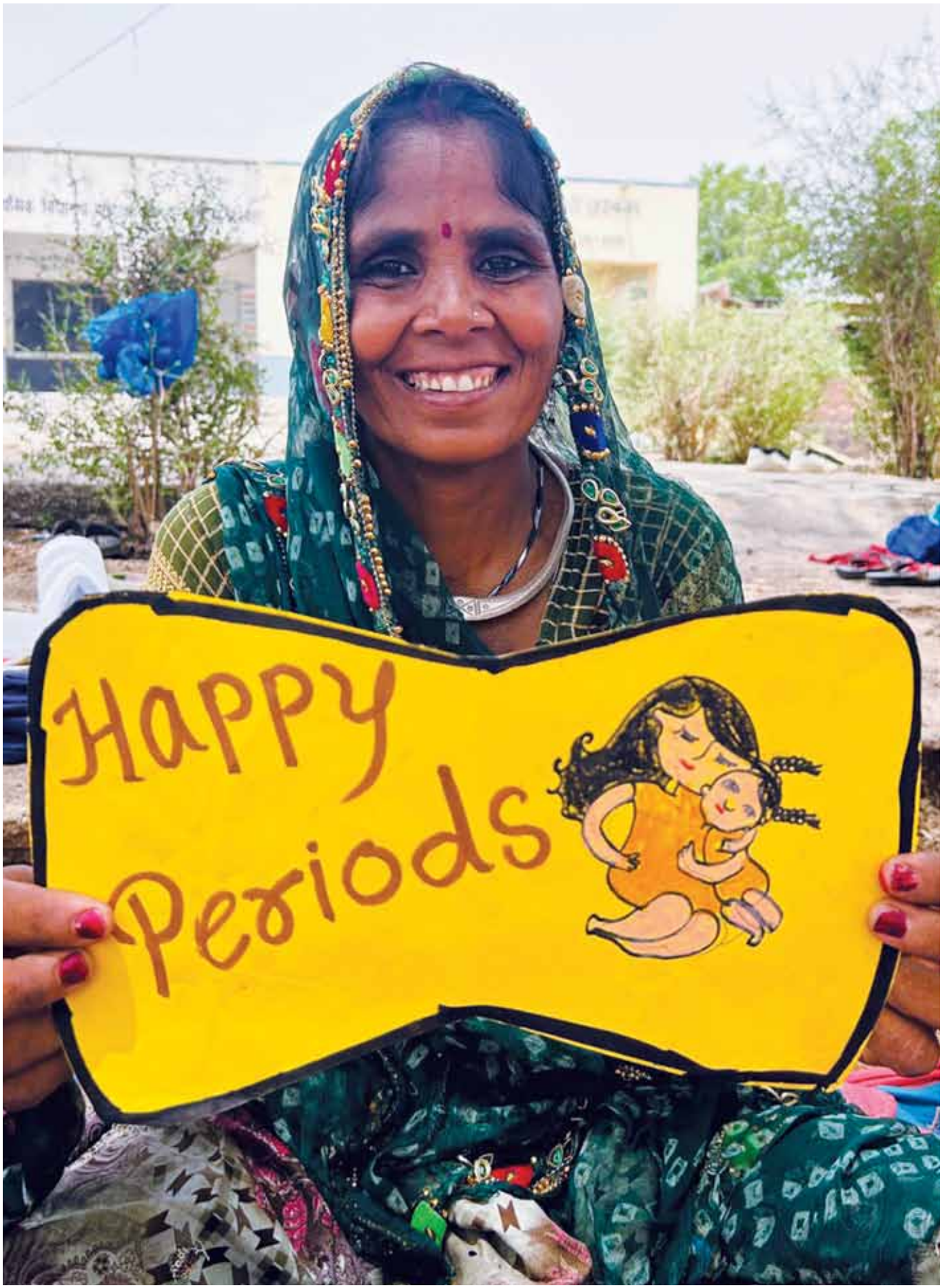
By Philip Chacko

NATURALLY HEALTHY

Among the most sustained social development efforts of the Tata Trusts in recent times is a subject that in many parts of India continues to evoke stigma and silence, shunning and separation. The 'menstrual hygiene management' (MHM) programme of the Trusts has concentrated on spreading the message that menstruation is a natural and healthy physiological phenomenon.

Launched as a pilot project in 10 Rajasthan and Uttarakhand villages in 2018 and now in its second phase, the MHM initiative has reached more than 191,000 rural women and girls — and some 45,000 boys and men as well — in seven states. The programme is currently being implemented in Gujarat, Rajasthan, Jharkhand, Andhra Pradesh, Assam, Maharashtra and Uttar Pradesh, and it includes advocacy efforts at the national and state levels.

On May 28, 2025 — World Menstrual Hygiene Day — the MHM initiative got a boost with the unveiling of a campaign that combines social and behaviour change communication in telling fashion. The goal of the campaign and the MHM programme is to help build an environment where women and adolescent girls can manage menstruation — with dignity and without apprehension.



(top facing page) **Members of the** Tata Trusts MHM team interact with women and adolescent girls in Avaniya village in Gujarat's Bhavnagar district; (above) **a villager from** Muliyakheda in the Sirohi district of Rajasthan at an MHM session.

(clockwise from left) **Villagers from** Achalpura in Rajasthan's Dausa district doing a body-mapping exercise during an MHM session; **women and** girls from Majgumi village in the Kamrup district of Assam at the completion of an MHM programme; **participants at** a revision session in a Jharkhand village.

Arabella
Hut

(clockwise from facing page) **The MHM** team in Assam at a team building and programme review event in Chandubi in Kamrup district; **a revision meeting** in a village in Jharkhand; **an MHM session** for boys — to educate them about hygiene, adolescence and growth — in Bhavani village in Gujarat's Dahod district.

(clockwise from left) **A health camp**, under the MHM initiative, for women and adolescent girls in Sirohi in Rajasthan; **women at an** 'education through participation' event in Chaygaon in Assam's Kamrup district; **women from** Muliyakheda village in Sirohi show off wristbands that mark their menstrual cycles.

‘We need deeper education reforms’

Education and child rights have been the principal themes of the research and advocacy **Archana Mehendale** has immersed herself in across a stellar career spanning more than three decades. A social worker by training, with a doctorate from the National Law School of India University, Bengaluru, Ms Mehendale has contributed to the drafting of several laws and policies while being extensively involved with academia and the nongovernmental sector.

Currently an adjunct professor at the National Institute of Advanced Studies, Bengaluru, Ms Mehendale speaks with *Christabelle Noronha* about education in India and the question of quality it is grappling with, and why children should be at the centre of the country’s development agenda. Excerpts from the interview:

How has India fared in the fundamentals of education — foundational literacy, numeracy and learning outcomes — over the 25 years you have spent studying and researching the subject?
India’s primary challenge since independence has been ensuring universal access to education. Most early policies and programmes were rightly centred on bringing girls, children with disabilities, and those from the socially marginalised communities into the school system. However, ‘quality’ as an expressed policy priority took a backseat.

It wasn’t until the 1990s that the conversation began to shift towards learning outcomes. Over the past decade in particular, there’s been a stronger focus on what students are actually learning, not just whether they are enrolled. This mirrors a global trend, and in India, the release of the Annual Status of Education Report and the National Achievement Survey sharpened the discourse. These reports exposed a sobering reality: a large number of children are not learning at grade-appropriate levels.

While access to education has improved dramatically, quality remains a serious challenge. That said, quality is an inherently complex and subjective concept. Over-reliance on testing can create unintended consequences, such as blaming teachers who are often operating within under-resourced systems. What we need are deeper reforms, looking into every aspect of our large and complex education system.

Both the central and state governments have introduced initiatives aimed at improving quality and have experimented with several

“We must invest in continuous teacher training, give teachers professional autonomy, and ensure resource-rich, stimulating classroom environments.”

approaches. However, there is a need to examine the evidence on what has worked and adopt promising practices. We must invest in continuous teacher training, give teachers professional autonomy, and ensure resource-rich, stimulating classroom environments.

And we can't ignore early childhood education. Research consistently shows that early nutrition, stimulation and nurturing environments are foundational for future learning. Without addressing these, we risk leaving children behind before they even begin formal schooling.

Your most recent work is a white paper for the Tata Trusts on innovative financing in the education sector. What, in a nutshell, were your findings and recommendations?

There's a growing curiosity around innovative financing in education,

particularly 'development impact bonds' and outcome-based funding. While the field is still emerging in India, the Tata Trusts have played a significant role in laying some early groundwork through their partnerships with Social Finance India and the British Asian Trust.

Although the government will continue to be the largest funder of education, we also need to recognise that philanthropy and CSR [corporate social responsibility] are playing critical catalytic roles, especially in testing and scaling interventions aligned with national priorities.

Transitioning to an outcomes-based financing approach is not easy. Many nongovernmental organisations lack the readiness to operate at scale, whether in terms of proven models, monitoring and evaluation systems, or comfort with performance-linked funding. Building a robust and innovative financing ecosystem in India will require a strong pipeline of nonprofits with tested interventions, technical partners for legal support and data systems, and funders who see the value of outcome-based models.

At the same time, there is a need to invest in building the ecosystem — in terms of developing standardised contracts, designing pooled outcome funds, creating rate cards, and establishing efficient evaluation methodologies — to reduce the high transaction costs and make these models scalable.

The white paper talks about the fall in foreign aid for education in India. What has been the impact of this on the system, and how can the shortfall be covered?

I would not be too worried about the fall in foreign aid because it has always been a small fraction compared with public spending on education. What matters more is improving domestic resource mobilisation through tax reforms, better budgeting and more efficient and transparent public spending. Globally, that's where the focus is shifting to. In India, we're also seeing growing contributions from mandatory CSR and philanthropy, much of which is directed towards education. So, the overall funding landscape is evolving and it's increasingly being driven by domestic priorities.

"Learning is a complex process... It would be counterproductive to pin legal accountability on the production of learning outcomes."

In the prickly matter of regulating education, what's the balance a country like India should be aiming for?

There's no doubt that India needs to review how it governs and regulates its education systems, particularly school education. This is one of the areas requiring comprehensive review and reform. There is a plethora of regulations; new norms have been added to the earlier ones and any private school would find it extremely difficult to navigate through this regulatory maze. Currently, there is a need to review state-specific legislation and affiliation norms, which not only vary widely but are also outdated or overly rigid.

Several of my former students over the years have aspired to start their own schools. But they have been discouraged by regulatory complexities,

Children at a school in Panipat in Haryana; says Ms Mehendale: "India needs to review how it governs and regulates its education systems, particularly school education."

just like so many of those who run small, alternative schools. The difficult issue they have to encounter is the application of 'public interest' standards for opening new schools. These are restrictive, often protecting existing providers from competition and limiting parental choice.

One of the suggestions made is that regulatory norms should apply to government schools, not just to private schools. In principle, I agree with this suggestion because there is a need to strengthen government schools as well and hold them accountable to basic quality standards.

But the proposal to replace input-based norms under the Right to Education [RTE] Act with outcome-based regulation is somewhat flawed, in my view. The Act only lays out minimum standards: safe infrastructure, qualified teachers, reasonable class sizes, etc. These are non-negotiable and form the foundation for any learning to take place.

Preserving some of the basic norms is also mentioned in the National Education Policy, 2020. The problem with shifting legal accountability solely to student learning outcomes is determining who can be held responsible if students don't achieve expected learning outcomes: would it be schools, teachers, children, parents or the 'system'? Learning is a complex process and is unique to each learner. It would be counterproductive to pin legal accountability on the production of learning outcomes.

What about child rights, the other dominant theme of your research? How would you assess the progress there?

As you know, India has a large young population, and we've been proactive in ratifying key international treaties on children's rights. But ratification alone does not ensure the protection of children; the real test lies in implementing these treaty standards. That requires developing strong policies, allocating sufficient resources, building systems for accountability, and taking action when violations occur.

Unfortunately, that's where we continue to fall short. While most states have established commissions for the protection of child rights — and we have a national commission as well — many of these bodies lack the capacity and resources to fully deliver on their mandate.

Although we have made significant progress in terms of enacting legislation, particularly in areas such as child labour, juvenile justice, child protection and disabilities, the gap between law and practice remains wide. Child labour remains a persistent issue.

We often assume that if a child is in school, they are not working, but that's far from true. Many children, especially from disadvantaged backgrounds, combine schooling with wage work. Yet prosecution rates for employers exploiting child labour remain extremely low.

Several children who don't belong in the juvenile justice system end up entangled in it, causing tremendous hardships for them and their families. Also, children with disabilities continue to face barriers to accessibility and are frequently denied the right to an inclusive education.

Another critical issue is that of fragmentation. The responsibility for child rights is spread across multiple ministries, including women and child development, education, health, and social justice; this diffusion weakens accountability and hinders coordinated action. There's still a long way to go. What we need is not just better laws, but well-resourced institutions, integrated governance and a firm political commitment to putting children at the centre of our development agenda.

How can organisations such as the Tata Trusts contribute to improving India's education indices? And where is the need most acute?

Given the scale and complexity of the challenges we face, there's a growing recognition among philanthropies of the need to align their priorities, collaborate, and work beyond silos. This shift towards collective action holds immense potential to amplify impact.

Philanthropies like the Tata Trusts have historically played a crucial role in enabling nonprofits to innovate, pilot new ideas and drive grassroots impact. But for that value to be fully realised, we must ensure that the evidence generated about what works, for whom, and under what conditions is widely shared. This knowledge should inform both government policy and civil society practice; otherwise, valuable insights risk being lost.

Equally important is the need to stay connected to the realities on the ground. While strategic alignment with national goals is important, philanthropies must also be willing to take risks and support emerging or underfunded areas that may not yet be mainstream. Listening to the voices from the field and responding to real, evolving needs is what will allow philanthropies to set new directions and become truly transformative since they operate all over India. ■

"We often assume that if a child is in school, they are not working, but that's far from true. Many children, especially from disadvantaged backgrounds, combine schooling with wage work."

Agriculture is an area where AI is making a difference

AI for social good: **Promises** and **praxis**

Artificial intelligence can do a world of good for society and its systems if used ethically and with care, but pulling that off is far from straightforward

'Singularity' is not just a random word; it's one with a deep underlying meaning. It was first used in 1873 by physicist James Maxwell in a different context, but now it's widely used with reference to technological singularity, which refers to a hypothetical point when artificial intelligence (AI) surpasses human intelligence. Some argue that we will see this sooner than later.

Homo Sapiens have been there for around 300,000 years and we have made steady progress since. In the last 100 years, however, changes in the world have happened at a lightning-fast pace thanks to technological advances. And now we have AI, dubbed the next big thing post the Internet and smartphone era.

Human civilisation is on the cusp of a massive transformation thanks to AI. It can be said with a reasonable degree of confidence that the world will look very different in the next two decades. Recall what the world was like, barely 20 years ago, without social media. Today, we cannot live without it.

The AI race among countries such as the US, China, Japan, Germany and France is so intense that we constantly hear about it. In July 2025, the US presidential office released a document

Arnab Mandal is a sustainable development practitioner who has been with the Tata Trusts for a decade. He has been involved in a variety of research studies and social impact programmes.

called 'Winning the Race: America's AI Action Plan'[1]. This talks about several measures and action points to ensure that the US remains the world leader in AI.

It helps that one of the key players in the AI universe is the powerhouse American company Nvidia, whose GPUs (graphics processing units) provide much of the computing power to run AI models. Nvidia is now the world's biggest company, with a market capitalisation of more than $4 trillion. That's more than India's GDP in absolute terms. That said, India is trying to catch up with the global leaders in AI through the India AI Mission and other initiatives.

Beyond academia

Pundits and policymakers worldwide are increasingly recognising the immense potential of AI to transform public systems and generate societal value. In the context, 'AI for social good' is not something that is being deliberated only in academic conferences. Substantial efforts are being made in this field, and several positive developments are already emerging in healthcare, agriculture, education, and other areas.

A standout example is Qure.ai, which was supported by India Health Fund, a Tata Trusts initiative. Qure.ai is known for its remarkable work in using AI to analyse radiology images of patients with suspected tuberculosis and other lung ailments. It is not only cost-effective, but it also offers extraordinary precision and a 99% reduction in turnaround time — from three weeks to two hours — to diagnose confirmed cases[2]. Qure.ai has already been used in 20 million-plus cases so far, and it has opened up avenues for significant use of AI in the space it operates in.

Another example is a pest management solution by Wadhwani AI called CottonAce, an AI-powered early warning system accessible through a simple Android app so that cotton farmers can make pre-emptive decisions by identifying when and where spraying is necessary[3]. This is a big boon in tackling pests and can potentially be used by more than 100 million cotton farmers globally.

Then there's Aardvark Weather, an AI-powered weather prediction system developed by researchers at the University of Cambridge. Aardvark Weather can deliver accurate weather forecasts much faster than other such systems, while using just a fraction of the computing power that current forecasting systems do[4].

There are several examples from around the world of AI enabling the conservation and restoration of coral reefs, and its potential to revolutionise our understanding of ocean ecosystems. By employing advanced algorithms, AI can analyse vast amounts of datasets — from satellite images, sensors and underwater drone footage — to help scientists monitor marine habitats more accurately and efficiently than ever before.

On a different tack, Carnegie Learning is using AI in its solution MATHia[5], which leverages symbolic and machine learning to continuously evaluate how students learn maths and what support they need to succeed. Another example is STRIVR, which uses an AI-enabled extended reality platform to provide real-world experiences to apprentices and vocational trainees in the fields of logistics, manufacturing, retail, hospitality, energy, healthcare, etc[6].

The wave is strong

The AI wave is so strong that the theme for this year's UNDP Human Development Report was 'A matter of choice: People and possibilities in the age of AI'[7]. ITU, the UN agency for information and

PATHWAYS TO PROGRESS

Several frameworks and policy papers on AI address factors such as ethics, biases, forecasting accuracy and inclusivity:

Framework/ policy discourse	Issued by	Year	Scope and applicability	Key principles and features
UN system white paper on AI governance	UN Chief Executives Board	2023	Global (ideally)	Human rights and dignity; transparency and explainability; accountability and safety; environmental sustainability; global cooperation
UN Independent International Scientific Panel on AI	UN General Assembly	2025	Global	The Panel will serve as a bridge between cutting-edge AI research and policymaking
UN Global Dialogue on AI Governance	UN General Assembly	2025	Global	An inclusive platform within the UN for states and stakeholders to discuss the critical AI issues
UNESCO recommendations on the ethics of AI	UNESCO	2021	193 member states	Human-centred AI; inclusion and fairness; privacy and data protection; environmental and social well-being; ethical impact assessments
Organisation for Economic Co-operation and Development's AI principles	Organisation for Economic Co-operation and Development	2019	Adopted by 40+ countries	Inclusive growth and human values; transparency and explainability; robustness and security; accountability throughout the lifecycle
European Union AI Act	European Union	Expected in 2025	Binding law for European Union members; global influence	Risk-based approach (unacceptable, high, limited, minimal risk); mandatory compliance for high-risk AI; transparency and human oversight
World Economic Forum's AI governance framework	World Economic Forum	2020	Businesses and governments globally	Responsible AI adoption; risk-based governance toolkit; transparency and interpretability; multi-stakeholder engagement

communication technologies, has a dedicated initiative called AI for Good that works on identifying innovative AI applications, building skills and standards, organising summits, recognising good work, and advancing partnerships to solve global challenges[8].

There is, undoubtedly, enormous promise for social good if AI is applied correctly and ethically. However, ethical considerations remain a ubiquitous challenge given the fact that big technology companies have a history of misusing user data. Deepfakes are creating a big ruckus globally as AI tools keep getting misused to create false imageries and narratives.

Geoffrey Hinton, regarded as the

A green turtle swims in the waters of the Great Barrier Reef in Queensland, Australia; AI has the potential to revolutionise our understanding of ocean ecosystems

godfather of AI – he won the Nobel Prize in physics in 2024 "for foundational discoveries and inventions that enable machine learning with artificial neural networks"[9] – is often heard talking about the dangers of AI[10]. His protégé, Ilya Sutskever[11], echoes these sentiments and advocates for building and deploying safe and responsible AI.

Mr Sutskever's company, Safe Superintelligence Inc, is working on the next big thing in the AI space. A key focus area of his work is superalignment with human values. Clearly, consciousness and ethics occupy a prominent space not only in the general debate around AI, but also in the research and evaluation of it.

Human civilisation has weathered many storms, and it has not only survived but thrived by using the power of science and technology. It is hoped that our moral compass will guide future pathways of AI development and its applications.■

Bibliography

1. https://whitehouse.gov/wp-content/uploads/2025/07/Americas-AI-Action-Plan.pdf
2. https://www.qure.ai/global-health
3. https://www.wadhwaniai.org/programs/pest-management/pest-management-ai-solution/
4. https://www.cam.ac.uk/research/news/fully-ai-driven-weather-prediction-system-could-start-revolution-in-forecasting
5. https://www.carnegielearning.com/blog/mathia-ai
6. https://www.strivr.com/content-studio
7. https://hdr.undp.org/content/human-development-report-2025
8. https://aiforgood.itu.int/about-us/
9. https://www.nobelprize.org/prizes/physics/2024/press-release/
10. https://mitsloan.mit.edu/ideas-made-to-matter/why-neural-net-pioneer-geoffrey-hinton-sounding-alarm-ai
11. https://www.utoronto.ca/news/ilya-sutskever-leader-ai-and-its-responsible-development-receives-u-t-honorary-degree