CSR TODAY

THE WORKPLACE OF THE FUTURE:
SMART, SUSTAINABLE, HOLISTIC

As organisations navigate new working arrangements in 2022, how can technology help to shape green, welcoming workplaces of the future?

CSR INTERVIEW
Protecting the planet with all-seeing eyes in space

CSR ISSUE
Mobilising communities trumps penalties in protecting seascapes: study

CSR CONCERN
Bird paradise Kutch turned avian graveyard by power lines

CSR TODAY
RATE CARD

ADVERTISEMENT SIZE	DIMENSIONS		1X RATE
	Non-Bleed	Bleed	
Inside Front Cover	185 mm (w) x 250 mm (h)	225 mm (w) x 290 mm (h)	₹2,00,000
Inside Back Cover	185 mm (w) x 250 mm (h)	225 mm (w) x 290 mm (h)	₹1,50,000
Outside Back Cover	185 mm (w) x 250 mm (h)	225 mm (w) x 290 mm (h)	₹3,00,000
Full Page (Colour)	185 mm (w) x 250 mm (h)	225 mm (w) x 290 mm (h)	₹1,00,000
Half Page - Vertical (Colour)	85 mm (w) x 250 mm(h)	-	₹50,000
Half Page - Horizontol (Colour)	180 mm (w) x 120 mm(h)	-	₹50,000
Quarter Page (Colour)	85 mm(w) x 120 mm(h)	-	₹35,000
Full Page (B/W)	185 mm (w) x 250 mm (h)	225 mm (w) x 290 mm (h)	₹60,000
Half Page - Vertical (B/W)	85 mm (w) x 250 mm(h)	-	
Half Page - Horizontal (B/W)	180 mm (w) x 120 mm(h)	-	₹30,000
Quarter Page (B/w)	85 mm(w) x 120 mm(h)	-	₹20,000

Bleed Advertisement charges: 20% extra for all sizes.

INDIAN CENTRE FOR CSR

For More Information:

INDIAN CENTRE FOR CSR
104, Nirman Kendra, Dr. E Moses Road,
Mahalaxmi Estate, Mumbai -400011.
Tel: +91 22 2490 30 78, +9122 2490 30 82,
+91 22 2495 52 60

Despite stress toll of Covid-19, mental health not seen as a development issue

Rajesh Tiwari
Publisher
rt@iccsr.org

A lack of understanding and clarity around how to measure mental health outcomes has made it hard to secure funding for programmes that address mental illness. It is difficult to be clear on measurable outcomes, if you are trying to drive attitudinal change.

Mental health has shot up the agenda for governments and businesses in the wake of the Covid-19 pandemic.

But mental wellbeing is still not recognised as a major development issue despite its outsized impact on health, productivity and the economy, experts warned at a conference for social investors.

In India, Covid-triggered mental health issues need urgent attention.

The Covid-19 pandemic brought a complex array of challenges which had mental health repercussions for everyone, including children and adolescents. Grief, fear, uncertainty, social isolation, increased screen time, and parental fatigue have negatively affected the mental health of children. Friendships and family support are strong stabilizing forces for children, but the Covid-19 pandemic has also disrupted them.

The mental health of millions of children worldwide has been put at risk, with at least one in seven forced to remain at home under nationwide public health orders – or recommendations – during the COVID-19 pandemic. More than 330 million youngsters have been stuck at home, till March 2021, for at least nine months, since the virus spread uncontrollably this time last year.

"We were in a mental health crisis before Covid-19. Since the pandemic, the problem has been exacerbated for millions of people," said Richard Hawkes, chief executive of the British Asian Trust, a charity that tackles poverty in South Asia.

"How is the world responding to the mental health crisis? It is not doing enough," he said to an audience of social investors at the AVPN Global Conference in Bali. Some 10 billion working hours are lost to mental illness every year, and yet the problem is "still not seen as a development issue", said Hawkes.

Mental health cuts across almost all of the United Nations' Sustainable Development Goals (SDGs), and is "a cause and a consequence of poverty", but the issue receives minimal funding from governments or philanthropic organisations, said Hawkes.

A lack of understanding and clarity around how to measure mental health outcomes has made it hard to secure funding for programmes that address mental illness. It is difficult to be clear on measurable outcomes, if you are trying to drive attitudinal change.

Only two per cent of global health budgets are spent on mental health, and only 0.5 per cent of philanthropic funding for health projects goes towards solutions for mental health issues such as depression and anxiety, he said.

The "bottom line" for governments and businesses is that mental health problems are often preventable, so more resources should be devoted to heading off psychological issues before they become a serious drain on health systems and economies.

Children too are facing problems.

Mild signs of anxiety, such as difficulty in sleeping or concentrating, have become common. But children are very resilient, and most will manage to cope with parents and peers' support.

However, some children are at greater risk of developing intense reactions, including severe anxiety, depression, and suicidal tendencies. Any pre-existing mental health problem, past traumatic experiences or abuse, family instability, or losing a loved one can make children highly vulnerable to developing severe mental health conditions. ⬛

Contents

28 | Cover Story

The workplace of the future: smart, sustainable, holistic

Dalmia Bharat Fuels Atmanirbhar Bharat Drive by Imparting Skill Training to Unemployed Youth in Odisha

Dalmia Bharat Limited (DBL) is reiterating its commitment towards its nation-building efforts through its Corporate Social Responsibility (CSR) arm, Dalmia Bharat Foundation (DBF), by imparting skill development training to unemployed youth in Odisha. The initiative is aimed at strengthening the nation's drive towards becoming self-reliant by addressing regional unemployment issues and helping improve the financial status of youth and their families in rural and urban pockets in Odisha where the company has a strong presence.

For this, DBF has partnered with Odisha Skill Development Authority (OSDA) to launch DIKSHa (Dalmia Institute of Knowledge and Skill Harnessing) centres in four districts including Cuttack, Jajpur, Sundargarh and Jharsuguda. The DIKSHa centres will offer Assistant Electrician, General Duty Assistant, Industrial Sewing Machine Operator, Retail Sales Associates courses to candidates as well as assist in employment opportunities in various firms within and outside the state to those that successfully complete their training.

"Since its inception, DIKSHa has been positively impacting lives of the youth and the communities, at large. This is because we believe in a shared purpose of not just imparting training to the future of our nation but to also make our

people employable and self-dependent," said Mr. Chetan Shrivastav, Executive Director - Dalmia Cement Bharat Limited and Unit Head, Rajgangpur. "By committing to provide quality training to the underprivileged youth we want to contribute towards skilling India and create an Atmanirbhar Bharat. We are confident that our endeavours will sustain livelihoods in the region and across India as well."

DBL launched the Skill Training Development initiative in 2017 and till date 3357 youth have completed training of which 2453 are successfully employed in various organizations. This has significantly lifted the social and financial status of the youth and have gained employment in firms including Westside, KITEX Ltd, Shahi Exports Ltd, Color Jersey Ltd, PORTEA Medical, 2050 Healthcare, RenewSys India Pvt. Ltd outside the

state. Within the last five years, 530 youth from Kheramuta, Rumabahal villages located on the periphery of the cement major's Rajgangpur plant and Lanjiberna Limestone mines have been successfully trained and employed. Assessing the benefits of the initiative, NABARD and DBF have also come together to impart CRM training to 55 youth in Rajganagpur and surrounding communities in two phases.

In line with the company's women empowerment program, the company has opened tailoring and beauty & wellness training centres for women and girls belonging to rural areas of Lanjiberna and Rajgangpur to create self-employment opportunities. The company now plans to extend these courses in the near future. DBF currently boasts of 14 skill development centres across India and has a training capacity of over 5000.

India's first free-of-cost multilingual Online Education Platform on AMR for Nurses launched

One of India's leading multinational pharmaceutical companies, Pfizer India and Americares India Foundation announced the launch of OPEN-AMR an Online Platform for Education among Nurses on Antimicrobial Resistance. Americares India Foundation, a health-focused relief and development organization, has joined as the execution partner. OPEN-AMR is a web-based platform that can be accessed by any nurse anywhere in India in seven different languages: English, Hindi, Malayalam, Tamil, Telugu, Kannada, and Marathi. Courses on the platform are available free of cost to the nurses and hospitals. The courses will focus on Infection Prevention and Control (IPC) practices and Antimicrobial Stewardship Practices (AMSP) under antimicrobial resistance (AMR), which is one of the world's top 10 global public health threats, according to the World Health Organization[i]. Additional courses will be included in subsequent years.

The platform was unveiled at India's first "Antimicrobial Resistance Summit 2022" by SMT KK Shailaja Teacher, Hon'ble Former Minister for Health & Family Welfare, Govt. of Kerala and Dr. Atul Goel, Director General of Health Services, Government of India. The Summit was organized by IHW Council as the knowledge and awareness partner. Reputed stakeholders from across the government, policymakers, healthcare experts, reputed medical and research institutions and scientists came together to discuss two of the most critical areas related to AMR at the summit:

- Challenges of infection prevention both in terms of health outcomes and economic costs
- Bridging the vital gap on antibiotic resistance, keeping in mind how AMR could well undermine the United Nations' mandated Sustainable Development Goals (SDGs) globally

Dr. Kamini Walia, Scientist F, Program officer AMR, Division of Epidemiology and Communicable Diseases, ICMR; Prof. (Dr) Roy K George, National President, Trained Nursing Association India and Dr. Urvashi Prasad, Director, Development Monitoring & Evaluation Office, NITI Aayog were few of the key panelists at the summit.

Speaking on the value of this program, Sharad Goswami, Senior Director-Corporate Affairs, Pfizer Limited, said, "Nurses are pillars of the hospital ecosystem in India and help in the efficient delivery of healthcare and in infection control. We believe that nurses can play a critical role in ensuring that good antimicrobial stewardship and infection control measures are practiced in hospitals. For many years now, tackling antimicrobial resistance has been a global and local priority for us at Pfizer. We are pleased to partner with Americares India Foundation and Medivarsity to make OPEN and the courses on AMR available to every single nurse in India."

Commenting on the effort, Dr Atul Goel, Directorate General of Health Services, Government of India said, "I'm happy to be part of AMR Program organised by Pfizer and its partners. Antimicrobial resistance is a growing public health concern, and the Government of India has taken cognizance through the implementation of the National Action Plans against AMR. We are happy to see the efforts that Pfizer and its partners are making to address the high burden of AMR in India. I would be glad to be part of the movement to control the menace and play an important role as DGHS, if pharmaceutical industry can play a responsible role in overcoming it."

Designing the audio-visual courses and the full curriculum was a multi-staged process and involved several experts and stakeholders from Pfizer, Americares India Foundation, and Medivarsity which is the technical partner for this program. The classes are available for all nurses, at different designations and levels of education and professional experience, from students to administrators and nurse supervisors. After the initial registration, nurses may select the course that optimally meets their professional requirements and receive a certificate on completion of each of the courses.

Commenting on the program, Shripad Desai, MD and Country Director, Americares India Foundation said, "We are pleased to partner with Pfizer and Medivarsity to launch OPEN-AMR in regional languages for nurses across India. I am confident that if nurses receive the right kind of training, they can become powerful advocates and enforcers of antimicrobial stewardship practices to help slow down the spread of AMR. It is estimated that AMR will cause 2 million deaths in India by 2050[ii]. We need to take quick, concrete action today if

we want to cause any reduction in that burden."

The OPEN-AMR program further strengthens Pfizer's Project Parivartan which is focused on addressing the current Infection Prevention and Control (IPC) challenges in healthcare facilities. Project Parivartan is also developing a model for Institutional Capacity Building to deliver facility-based IPC and antimicrobial stewardship in 11 small and mid-size hospitals across India. OPEN has already been launched in 9 of the 11 hospitals and has received excellent feedback from on-ground healthcare professionals so far.

Commenting on the value of OPEN-AMR, Dr. Devikumar Kelkar, Director, Narayani Hospital, Nashik said, "On this platform, our nurses have been able to access over 11 hours of high-quality training on AMR and grow in their understanding of how best to tackle this public health challenge at the hospital. We are grateful to Pfizer, Americares India Foundation and Medvarsity for putting together this much-needed curriculum and for making it so freely accessible to all."

The 6 courses currently being offered on OPEN are:

1. Introduction to Infection Prevention & Control and Antimicrobial Stewardship
2. Common Infection Prevention and Control Practices
3. Basics of Antimicrobial Stewardship and Core Components
4. Advanced Infection Prevention and Control Practices
5. Healthcare-Associated Infections And their Control practices
6. Antimicrobial Stewardship Principles and Action Planning

Essar Power strengthens its commitment towards HSE

Essar Power Limited, India's first private sector independent power producer with over 25+ years of track record has once again surpassed its own bench mark in Health, Environment and Safety (HSE).

The company has achieved a remarkable feet of 6,948 Lost Time Accident (LTA) free days in FY 2021-2022. It has also taken several initiatives across all its plants to reduce its carbon foot print and transition the existing businesses towards greener and cleaner alternatives.

Kush S, CEO, Essar Power Ltd said, "Under our ESG philosophy, we have identified three themes – Decarbonisation, Decentralisation and Digitisation to reduce our carbon foot print and been in the process of curating a green balance sheet around renewable energy which is in line with Essar's strategy of investing in future-centric businesses which give a superior rate of return within the ESG framework." With regard to Health, Essar Power, Hazira Complex (EPHL) has taken maximum precautionary measures to protect all its employees at site especially since the outbreak of Coronavirus. To ensure workplace safety, it has also conducted vaccination drive at site for all its employees.

On the safety front, Essar Power, Hazira Complex (EPHL) has maintained with its excellence in safety management. It clocked 2,256 Lost Time Accident free days and Zero Major Accident for year 2021-22. EPHL also completed ISO 45001:2018 and ISO 14001:2015 Recertification audit without Major or Minor Non-conformity.

In relation to the environment, EPHL commissioned ECOSTP (Sewage Treatment Plant) of 20 KLD capacity to treat domestic waste water which is reused for horticulture purpose. This plant unit implements technology to meet Zero Energy Consumption, Zero Chemical Consumption, Zero Maintenance and Zero Manpower Requirement. Additionally, it commissioned Alkali Scrubber Unit for SO2 emission reduction from flue gas for both units, through which EPHL aims to achieve 25% reduction in SO2 emission. It also received CCA Amendment for increase in coal quantity consumption from Gujarat Pollution Control Board.

Ericsson and Save the Children strengthen critical pediatric care in 5 cities

This healthcare initiative will benefit over 50,000 critically ill children in need of respiratory support

To serve the needs of critically ill children in the age group 0-12 years, Ericsson and Save the Children, India's leading child rights organization have set up modern Pediatric Intensive Care Units (PICU) across government hospitals in the five cities of Kolkata, Hyderabad, Pune, Jaipur and Indore.

The critical care facility at the CMC Jijamata Maternity hospital (Pune), Niloufer hospital (Hyderabad), Institute of Child Health (Kolkata), PC Seithy Hospital (Indore), Pandit Deen Dayal Upadhyaya Hospital (Gangori, Jaipur) have been provided life-saving equipment like ventilators, oxygen concentrators, bi-pap machines, pulse oximeters, and other critical medical supplies. The equipment will not only cater to COVID cases in children, but will also be life-saving for over 50,000 children in respiratory distress (lack of oxygen due to infections & pneumonia), critically ill and OPD cases in the city and from nearby areas. The health facilities are now geared up operationally to provide high quality care to children. The pediatric care unit in Kolkata was inaugurated on site today.

Speaking on the occasion, Amitabh Ray, MD, Ericsson India Global Services stated, "The pediatric wards across these hospitals will cater to more than 50000 children in the first year itself. We hope this

partnership with Save the Children towards strengthening the pediatric facilities will go a long way towards making a difference in the lives of young children who need critical medical care."

Anindit Roy Chowdhury, Chief Programme Officer, Save the

Children added, "Save the Children, with support from Ericsson India, have partnered with Institute of Child Health (ICH) in Kolkata to intensify the paediatric care requirements of the hospital. Our purpose was to build technical and infrastructural capacity in ICH so that children get crucial paediatric medical care. ICH is committed to managing this facility to ascertain the sustainability of the efforts that have been undertaken. I take this opportunity to thank Ericsson India for their generous support. I also take this opportunity to wish ICH the very best and the children who come here seeking services get the best services that they truly deserve."

Genesis Foundation, SBI Foundation jointly save 2-month-old baby from rare heart failure

Two month old, Sakshi (name changed) had a hole in her heart called the Aorta Pulmonary Window. With extreme respiratory distress, the child would not have survived infancy if she had not received timely treatment, with financial support from SBI Foundation, through Genesis Foundation. Weighing just 2.9 kilograms, Sakshi is one of the smallest children in India to undergo device closure of Aorta Pulmonary Window. She is the only child of Sahira (name changed) and Suhail (named changed) from Thane in Maharashtra. A few weeks after her birth, Sakshi had breathlessness and had problems in taking feed. She was diagnosed with a complex congenital heart defect called Aorta Pulmonary Window (AP Window). It occurs in 0.1% of all children born with heart defects.

In a normal heart, there are two main arteries, the aorta and the pulmonary artery, where the aorta carries blood to the body and the pulmonary carries blood to the lungs. In an AP Window, there is a hole between these arteries, which leads to an increased flow of blood to the lungs, thereby increasing the lung pressure. Children with AP Window require immediate intervention, otherwise they do not survive infancy and die due to heart failure.
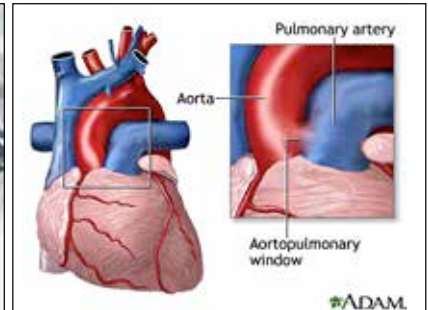
Dr L Srinivas, the pediatric cardiologist at Jupiter Hospital, Thane did her device closure in the Cath Lab. Her father is a labourer (loader) earning a very humble salary. With no money for treatment, her surgery was funded by SBI Foundation in coordination with Genesis Foundation.

At two months with a weight of 2.9 kilograms, Sahira is one of the 25+ children that SBI Foundation is supporting in partnership with Genesis Foundation. In most of the cases where children are born with simple heart defects, one-time medical intervention ensures that they are treated for life and can lead a normal life.

Flipkart has trained over 10,000 farmers on product quality and food safety to enable market access and empower the farmer community

Flipkart, India's homegrown e-commerce marketplace, today announced that it has now trained and built capacity with over 10,000 farmers across the country, providing them with national market access and enabling their growth. Flipkart Grocery, as part of its commitment to handhold farmers in their digital journey, has onboarded multiple Farmer Producer Organizations (FPOs) in its ongoing efforts to build an inclusive and sustainable platform for farmer communities and farmer producer organizations across India.

To help FPOs adhere to quality standards on e-commerce platforms, Flipkart has conducted training and capacity-building programs to strengthen the production of FPOs, small and marginal farmers. The training and education cover all aspects of quality produce - raw material supply, repackaging centers, verification of quality produce, buying strategy, purchase order, payment terms and conditions, and logistics. These are done through virtual and on-ground training sessions.

Flipkart has collaborated with FPOs, and small and marginal farmers across states like Karnataka, Andhra Pradesh, Telangana, Madhya Pradesh, Kerala, Maharashtra, Gujarat, and Uttar Pradesh. Through these partnerships, Flipkart has been able to source pulses, millets and whole spices, by bringing them onto its platform, in turn impacting thousands of livelihoods of the farmer community.

Bharat Petroleum Corporation Limited supports a CSR initiative "Integrated Cancer Care and Cure"

Bharat Petroleum Corporation Limited has been supporting a CSR intervention "Integrated Cancer Care and Cure" in partnership with Indian Cancer Society which encompasses "Preventive" as well as "Curative" dimensions of Cancer Care. The project comprises of Cancer Screening camps for Oral, Cervical and Breast Cancer in Uttar Pradesh, West Bengal and Maharashtra along with financial support for treatment of cancer in through 10 government/non for

the ambassador of the message "Childhood Cancer is Curable" in society. Throughout the year Ugam volunteers are involved in many activities to create awareness of curability of cancer and foster bonding amongst cancer survivor's fraternity.

700 Cancer screening camps are also supported by Bharat Petroleum Corporation Limited towards the screening of Oral, Cervical and Breast Cancer at Pune, Kolhapur, Varanasi and Kolkata. These camps would be secerning more than

profit hospitals PAN India as well survivorship & rehabilitation programs for cancer survivors.

BPCL has supported the entire cancer spectrum through its CSR activities. "Ugam"- a voluntary cancer survivors' support group is an integral part of the overall program which has been formed by Childhood Cancer Survivors who have completed treatment. UGAM means "To Rise", underscoring the determination of childhood cancer survivors, to rise above all obstacles in life and be VICTORS. UGAM has been set up with an aim to empower the survivors & become

70,000 beneficiaries over a period of two years.

Under this program, Indian cancer society which is one of the national organization for awareness, detection, cure and survivorship of those affected by cancer, has developed a holistic rehabilitation interventions for optimizing quality of life of underprivileged childhood cancer survivor and bringing them into mainstream society. It also includes establishing survivorship clinics, educational support, vocational skill program and UGAM – support group network of childhood survivorship.

Future Generali India Insurance conducts awareness session on importance of insurance for parents in Ranchi

Future Generali India Insurance (FGII), conducted an insurance awareness session for parents at Anganwadi Kendra - Chama in Ranchi district. About 40 parents attended the session. During the engaging session, team FGII educated the parents on the importance of insurance, various types of insurance covers they can easily avail and their benefits. Parents were also informed about the relevant government insurance schemes. The team also explained the concept of Self Help Groups (SHGs) and the advantages of forming them.

Cygnet Infotech strengthens its CSR program to support children's e-learning

Cygnet Infotech, a leading technology organisation, till date has donated 90 mobile tablets to Samerth Charitable Trust as part of its CSR project, which focuses on e-learning. This initiative has helped to build a 'Digital Library' for underprivileged children.

During the lockdown last year, Cygnet Infotech donated mobile tablets to the NGO, which are available for educational purposes for more than 400 children at the NGO's centers across Ahmedabad.

The organization has further strengthened this initiative by adding more tablets to the library. Mr. Bhaichung Bhutia, Indian former professional footballer, was the chief guest at the 22nd founding day and presented the mobile tablets to the management team of Samerth Charitable Trust, at Ahmedabad.

Cygnet Infotech will continue its endeavour to promote e-learning amongst the under privileged children and foster their creativity through these digital assets.

Milaap launches Milaap 360 to diversify online giving

MOHAN (Multi Organ Harvesting Aid Network) Foundation, a leading organ donation organization, one of the first organizers on the platform

Milaap.org has announced the launch of Milaap 360, India's first "all-in-one" digital fundraising solution. The new platform by Milaap offers an interactive medium to individuals and organizations to fundraise for causes using various tools such as recurring donations, ticketing, live streaming, lucky draws, pledges and many more modes of engagement.

Global digitization has significantly changed patterns of thoughtful giving all over the world. People prefer the online medium for almost everything - starting from professional commitments to engagements that are very personal. Even more so during the pandemic, when fundraising saw a whole new dimension in terms of driving campaigns and reasons for donors committing to a cause. Organizers mobilized resources by blending time-tested offline fundraising methods with the very recent online trends as virtual concerts through live streaming, online auctions, pledges, challenges, putting up collectibles and many more.

To widen possibilities and make a long-term experience, Milaap 360 is designed to guarantee a hassle-free virtual fundraising experience for the online-natives of today while seamlessly integrating the traditional methods of running a fundraiser. Each organizer on the platform will have the liberty to design their own page, with their branding, content, logo, updates as per requirement. They will be the primary decision maker on how best to drive traffic to their pages by availing analytics.

Anoj Viswanathan, Co-Founder and President of Milaap.org, India's first zero-fee crowdfunding platform said, "Organizing fundraising gala events require immense planning, resources and space. There are so many uncertainties that organizers have to deal with while still being relevant and appealing to donors." He further added that, "Being a brand that believes in bringing forth customer-centric solutions, Milaap 360 attempts to be an integrated solution for organizers and donors to drive successful fundraisers in a flexible, advanced and seamless manner in this constantly shifting world."

Dr. Moopen's Medical College announces the launch of a Botanical garden for students, botanists, horticulturists on World Environment day

To mark the 50th anniversary of World Environment Day celebrated every year on June 5, Dr. Moopen's Medical College alongside Aster Volunteers, Aster DM Healthcare's global CSR arm and also the implementation partner, dedicated a massive area for the development of a botanical garden near its premises in Wayanad in Kerala.

Named after Naseera Moopen, wife of Dr. Azad Moopen, Founder Chairman and Managing Director of Aster DM Healthcare and also the Founder of Dr. Moopen's Medical College, the garden would be called Naseera Botanical Garden. Launched in partnership with Swaminathan Foundation, 'Naseera Botanical Garden' will be home to a wide range of plants, trees, flowers, etc and will be open for students, botanists and horticulturalists for research work. The garden will also feature rare plantations of special interest from around the world and would be ready to receive public and students over the next two years.

The project was inaugurated by Dr. Madhura Swaminathan, Chairperson, MS Swaminathan Research Foundation (MSSRF), Prof. Indian Statistical Institute, Bengaluru. Also present at the inauguration were: Dr. Gopakumaran Kartha, Dean, Dr. Moopen's Medical College; M U. Basheer, Executive Trustee, Dr. Moopen's Medical College; Dr. Anil

Kumar, Senior Director, MSSRF; Dr. Shakeela, Director, Community Agrobiodiversity Centre (CAbC) and Dr. Hariharan, Executive Director, M.S Swaminathan Research Foundation. On the occasion, the Swaminathan Foundation also presented saplings to the Naseera Botanical garden which were planted by the officials present.

Talking about the initiative, Dr. Moopen said: "Dr. Moopen's Medical College and Hospital in Wayand, with its 50 acre campus situated in one of the most scenic places in God's Own Country- Kerala, provides learning and healing opportunities in the lap Mother

Nature. In order to contribute to the preservation of the ecologically fragile environment and to instill the importance of preserving nature among students and visitors from India and abroad, we are establishing the Naseera Botanical Garden, in association with M S Swaminathan Research Center at Meppadi. We hope this botanical garden will help to preserve and gain knowledge on various medicinal plants, herbs, shrubs, trees and flowers in the Western Ghats, some of which are under threat of extinction. We hope to make Naseera Botanical Garden, a tourism destination, with active participation of Aster Volunteers.

We request your support for this unique effort to spread awareness on preservation of nature, in alignment with the objectives of Haritha Mission and UN Sustainable Development Goals (SDGs)."

As part of the World Environment Day celebrations, Aster Volunteers across Aster DM Healthcare's network in seven countries distributed seeds and saplings to the common citizens to spread the message of preserving nature for our future generations. All employees of Aster also took a pledge to work towards giving back to the nature and contributing towards a greener tomorrow.

Schoolnet partners with Chate Group of Education to drive digital education facilities in Maharashtra

The partnership will provide close to 12,000 students across 40 branches with digital learning technologies

Schoolnet, a unique and leading EdTech company that provides technology-based education services to schools, announced a partnership with the Chate Group in Maharashtra. Under this partnership, close to 12,000 students attending the coaching facility annually across 40 branches in the state, can now enjoy access to digital learning technologies like Geneo and KYAN. The association will also cover the Chate schools in Maharashtra.

As a part of the initiative to drive digital learning solutions, Schoolnet will implement K-YAN, its integrated community computer, interactive multimedia content and Geneo learning app for both CBSE and Maharashtra State Board, along with learning management systems that digitize the content, assessments, and assignments. The offerings will be extended for both new as well as existing students.

The MoU with the Chate Group was signed in the presence of Prof Gopichand Chate (Chairman), Dr. Pankaj

Chaudhari (Academic Head), and Adv. Vithal Chate (Legal Advisor) from the Chate Group. They were accompanied by Mr. Shourie Chatterji (Chief Digital Officer), Mr. Jaydeep Singh (Zonal Head- West), Mr. Sachin Arsule, and Mr. Ravindra Rathod from Schoolnet.

Commenting on the partnership, RCM Reddy, MD & CEO, Schoolnet India Ltd. said, "At Schoolnet, we are continuously looking to increase digitization of education across the country. Within Maharashtra, our partnership with the Chate Group takes forward our mission of providing quality and affordable education to all. We stand strong on our commitment to bridging the digital divide in education that exists in the country. We look forward to a long-lasting association and creating an impact on students across the state."

Adding his thoughts, Prof Gopichand Chate, Chairman of the Chate Group said, "We at Chate, strongly believe that individually we are just one drop but together we are a vast ocean, the ocean of knowledge, progress, and success. We feel pleased to take the opportunity of being one with Schoolnet to let our students grab the prospective pearls of quality education by exploring the deeper levels of experiential learning in an impactful way."

Only One Earth: Cosmo Foundation plants 15,000 trees

The Initiative is part of Cosmo Foundation Go Green Initiative where the foundation has planted more than 50,000 trees

Cosmo Foundation, the philanthropic wing of Cosmo Films Ltd has planted more than 15,000 trees at the Army Equestrian Centre, Delhi Cantonment in association with Prayas Youth Foundation – a leading environmental organization in New Delhi.

The drive is a part of Cosmo Foundation Go Green Initiative to take a step towards creating a green and clean environment while contributing directly to the well-being of Mother Earth and our future generation. As of now, the foundation has planted more than 50,000 trees under the initiative across India.

Speaking on the occasion, Lt Gen. SS Mishra (QMG) addressed the attendees and said, "We are very appreciative towards the efforts of environment conscious businesses like Cosmo Films Limited. Cosmo foundation's contributions are significant in preserving the greenery of Delhi and would benefit the people around. This massive tree plantation drive of Cosmo Foundation will help to improve UN SDG no: 15. Life On Land – that emphasizes planting of tress to help protect the environment."

Under Cosmo's Miyawaki project, the pioneer Miyawaki technique would be used to restore forestry cover in urban spaces. This technique is very useful in creating forests in small urban spaces as it allows for plants to grow 10 times faster and the plantation to be 30 times denser than usual. It involves planting dozens of native species in the same area, and becomes maintenance-free after the first three years.

Ashok Jaipuria, Chairman & Managing Director, Cosmo Films Limited, said "Cosmo Foundation's philosophy is built on a robust environmental sustainability agenda and the determination that we can bring about change in the society. Through this initiative, we aim to encourage tree plantation and preservation of nature to uphold environmental balance by our communities in our areas of operations and beyond. As part of our consistent efforts to combat climate change in India, we will plan more such plantation drive in the near future and take every possible step to make our society greener and sustainable."

On this occasion Yamini Kumar Jaipuria, Managing Trustee of Cosmo Foundation said, "Cosmo Foundation has been at the forefront of preserving natural spaces and environment. We want to meaningfully engage at the intersection of community and sustainability. With this plantation drive, our goal is to do our part in order to protect the environment by planting as many trees as possible. These efforts are also valuable to communities and people living around as they enable the conservation of green ecosystems."

Experts discuss the Circular economy and Recycling of Beverage Cartons

The Action Alliance for Recycling Beverage Cartons (AARC), 3R WASTE Foundation and United Nations Centre for Regional Development (UNCRD) Japan, Urban update and All India Institute of Local Self Government joined forces on 6 June to promote an integrated approach to address the issues and opportunities in the recycling of beverage cartons and plastic packaging.

During the webinar conducted by AARC, 3R Waste foundation and UNCRD on "Recycling Beverage Cartons and Plastic Packaging in Circular economy", several industry stakeholders along with waste management partners, recycling partners and academicians where they made their submission on improving the waste management eco-system.

The primary objective of the webinar was to cascade awareness on segregation of waste and disseminate information amongst different target groups on Circular Economy and Beverage carton recycling. During the session, industry stakeholders highlighted the encouraging role, technologies in segregation of wastes and recycling of beverage cartons. Earth is facing a triple planet emergency and the ecosystem cannot cope up with our rising demands. One must recognize that end consumers and infrastructure both have a role in waste business success.

Dr. Kulwant Singh, Former Regional Advisor Asia UN-HABITAT and the CEO of 3R WASTE Foundation moderated the webinar. The eminent panelists of the webinar were Mr. Choudhury Rudra Charan Mohanty, Environment Programme Coordinator, UNCRD-DSDG/UNDESA, Mr Gyan Prakash Misra, Senior advisor (Waste management), Mosaic Advanced Solutions, Prof. Sadhan K Ghosh, President, ISWMAW, Mr. SN Umakanth, Chief Manager, WOW programme, ITC, Ms. Paramita Datta Dey, Head Waste unit, NIUA, Mr. Sanjiv Kumar, Head, Re Sustainability.

Choudhury Rudra Charan Mohanty, Environment Programme Coordinator, UNCRD DSDG/UNDESA stated that beverage cartons are the one of the resource efficient packaging. He expressed that we can move towards a Zero waste society by active coordination from Govt, WMA, End users, Companies etc. Beverage cartons are much more efficient in terms of resource efficiency as well as recycling as compared to other formats and hence have a promise to play a bigger role in the circular economy. He also stated that 3R also means resilience and how we manage resources will define resilience. He asserted that affordable solutions and technologies are now available for recycling Beverage Cartons as well as Plastics.

Prof. Sadhan K Ghosh, President, ISWMAW discussed the path for recirculation of plastic packaging and its benefit in the economy. Prof Ghosh asserted that for post-consumer waste the primary responsibility is with the consumer- who should segregate and responsibility dispose of the waste as there is no alternative to source segregation for efficient waste management. Different types of technologies for recycling plastics were briefly discussed. He also stated that to address the problem of waste in the country, reuse and recycling of Beverage cartons is the solution.

The prevailing concept of EPCD2 was presented – Extract, produce, Consume, Dispose, & deplete and he highlighted how we cannot continue with the same model of EPCD2 if we want to progress towards a circular economy.

Gyan Prakash Misra, Senior advisor (Waste management), Mosaic Advanced Solutions discussed the difference between linear economy and circular economy and its benefits to the environment as a whole. He also emphasized on the collection and segregation of plastic waste and focused his presentation on 4R's – Reducing, Recycling, Renewing and Responsibility. The emphasis on Renewing and Responsibility was worth noting. He also noticed that the paper based packaging has potential to be recycled 5-7 times.

Paramita Datta Dey, Head Waste Unit, NIUA discussed sustainable packaging and how it can lower the environmental impact and ecological footprint. Ms. Dey educated on Reusable, Recyclable and Reduced packaging as new practices for adopting the packaging solutions. She cited examples of several packaging materials made from natural materials such as mushroom, bagasse, stone paper, seaweed etc. She also stated that Paper based cartons can be recycled and up scaled 5-7times.

Sanjiv Kumar, Head, Re Sustainability talked about the presence of integrated recycling services like E- waste, paper recycling, C&D recycling, End of vehicle recycling etc. in the country. He briefly discussed the Collection, Processing, Post-Processor of waste. He also reiterated the promise that digital technologies bring in the waste management space.

IIFL Foundation launches Rajasthan's first agricultural drone which takes 3 minutes to spray pesticide in an acre

IIFL Foundation, one of India's largest corporate social initiative foundations has launched Rajasthan's first 'Agricultural Drone' at Maharana Pratap University of Agriculture and Technology (MPUAT) to boost research. This is also one of India's first agricultural drone initiatives by a CSR foundation.

The custom made 2 meter wide, battery powered drone can spray over an area of 1 acre in less than 3 minutes. An android phone is mounted to its wireless remote that allows easy navigation. The structure comprises of 6 arms, 6 propellers and 4 spraying nozzles which can easily cover large farm areas in few hours that takes a day or 2 for manual spraying.

The drone was launched by Vice Chancellor of MPAUT Dr. Narendra Singh Rathod, Madhu Jain, Director IIFL Foundation, Dr. Lakhan Poswal, Principal, RNT Medical College (Udaipur) and members of MPUAT at the instructional farm in MPUAT's campus, Udaipur, in presence of Farmers.

IIFL Foundation has provided this custom built agricultural drone to MPUAT for research and educational purpose. Thedrone having an AUW (All up weight) of 25 Kgs. isdesigned and built by blueINFINITY Innovation Labs (P) Ltd., capable of carrying15litres of liquid. This marked as avery first technological innovation of its kind in Rajasthan, to promote next-generation modernization in farming.

Dr. Narendra Singh Rathod, Vice Chancellor of MPUAT said, "We are highly grateful to IIFL Foundation for choosing our University to grant

Mrs Madhu Jain, Director, IIFL Foundation launches agricultural drone

such an innovation. Of all the technological innovations that have been made in agriculture, drone based services is definitely the next best step. Currently the Drone will be used to spray insecticides, pesticides and other liquid based supplementary nutrition to the crops. In coming time we shall certainly enhance the technology with research and contribution of our students."

Madhu Jain, Director IIFL Foundation, said, "IIFL group is one of the largest financial services conglomerate and its CSR Arm – IIFL Foundation , through its activities is creating an impact among communities through the ideology of HELP - health, education, livelihood and poverty alleviation. The agricultural drone is an innovation that shall allow farmers to save time spent on manual spraying, avoid over exertion in the extreme hot climate & also safeguard them against any

illness arising out from over-exposure to pesticides & insecticides"

This is IIFL Foundation's second drone initiative after the successful launch of Maharashtra's first drone-based last mile vaccine delivery in Palghar district. The project was done in partnership with Ministry of Health and Government of Maharashtra. It became India's first such innovation with a payload capacity of 5 kg and operating within a radius of 25 km, delivering life saving vaccines at the earliest.

The IIFL Foundation's Drone Vaccine Delivery has been awarded the 'Most Innovative Solution for COVID-19' award at the prestigious World CSR Congress (2022). The project was the subject of discussion at the Dubai Expo 2022 and many Asian, European and African governments are looking to replicate it with the permission of the relevant authorities.

KDM Founder N D Mali planting saplings on World Environment Day

KDM pledges to raise 75 micro-forests across India on World Environment Day

Unveils Miyawaki afforestation project VRUKSHYGEN at Railway Coach Yard, Central Railway Mumbai

On the occasion of World Environment Day, Mumbai-based leading consumer lifestyle & mobile accessories brand KDM spearheaded a unique afforestation project in Miyawaki style at Railway Coach Yard, social enterprise Go Shunya, ISCKON Govardhan Eco Village and NSS Cadets.

Known worldwide as the Miyawaki model, named after Japanese botanist Akira Miyawaki, it involves raising a dense mini-forest on a small parcel of land using only indigenous species. KDM Founder N D Mali, Central Railway

KDM Founder N D Mali with VRUKSHYGEN placard

General Manager Anil Kumar Lahoti, Go Shunya CEO Gopal Raithatha and senior railway officials were amongst those present on the occasion. The depleting forest cover

has propelled KDM to raise similar 75 micro-forests on the Miyawaki model into a full-fledged program called VRUKSHYGEN across India to celebrate and commemorate 75 years of Independence. The project is aimed to fill the gap and make India green with a unique concept of growing and self-sustaining micro forests with an objective to enhance and increase the oxygen levels in urban, semi urban, tier 2 & 3 cities.

The project aptly named VRUKSHYGEN is a combination of words Tree and Oxygen. Just as man cannot survive without oxygen, nature cannot be saved without trees. N D Mali, Founder of KDM, who is on a mission to contribute back to Mother Earth said, "Inspired by honourable Prime Minister and in association with Govardhan Eco Village and NSS Cadets, we have taken this noble initiative of restoring the forest cover in the country.

Tata Steel celebrates World Environment Day 2022 with renewed enthusiasm and purpose

Tata Steel observed World Environment Day 2022 which saw a host of sustainability initiatives and community events across its operating locations. World Environment Day, celebrated around the world on June 5 since 1974, was observed this year under the broad theme of "Only One Earth", calling for collective, transformative action on a global scale to celebrate, protect and restore planet Earth.

After a gap of two years due to the pandemic, this year, the celebrations, events, and various activities were organised physically at various Company locations.

On the occasion, T. V. Narendran, CEO & MD, Tata Steel, said: "At Tata Steel, our mission will continue to be creating value for all our stakeholders while keeping sustainability at the core of all we do. As we observe World Environment Day, we join everyone around the globe to reflect on the health of our environment and how intertwined it is with our own wellbeing as well as reinforce our commitment to make this world a much better place than what we had inherited from our forefathers. Let's come together today, for a better tomorrow."

The highlights of this year's celebrations included plantation drives and inauguration of several facilities in Jamshedpur - Rooftop Solar and Rainwater Harvesting

Project at Naval Tata Hockey Academy campus, new Packaged Sewage Treatment Plants (PSTP) at Nildih (150 KLD) and Baridih(700 KLD), Rejuvenated Water Body at Tata Steel Zoological Park, and five electric vehicles (EV) charging stations, four in Jamshedpur and one in Kolkata. An hour-long "Greenathon' was also held in the early hours of June 4, 2022 in which more than 1000 people participated.

In the last week of May this year, Tata Steel had organised drawing and elocution contests for school students at JRD Tata Sports Complex, Jamshedpur. The contests were organised on this year's theme of World Environment Day - "Only One Earth". The programme, attended by around 800 students, was aimed to sensitise students on the relevance of observing World Environment Day.

A webinar with Dr Gufran Beig and Sir Ashutosh Mukherjee Chair Professor, National Institute of Advanced Studies, was also organised today at Beldih Club, Jamshedpur. The awardees of all the competitions were also felicitated during this programme.

Tata Steel Kalinganagar planted 5000 saplings at various locations inside the plant premises. A host of activities including drawing competition and awareness sessions for school children and quiz competition for employees were organised. 1000 fruit bearing saplings were also distributed amongst the school children during the drawing competitions.

A slew of initiatives like Drawing, Poster, Quiz, Slogan, Poetry competitions for creating awareness

amongst employees, business partners, family members, and community members were organised throughout this week across the three locations - Meramandali, Sahibabad and Khopoli. More than 2500 saplings were planted during this occasion by the employees in Meramandali plant. A mass plantation drive was also organised at Tata Steel's plant located at Savroli near Khopoli under Raigad district of Maharashtra. Greenathon was also organised at Meramandali and Khopoli township in which more than 300 employees as well as their family members participated. Tata Steel has consciously invested in biodiversity conservation and has been actively working with several organisations, to enhance its performance in biodiversity conservation and significantly reduce its impact on ecosystem and biodiversity. Being a business leader in steel making, mining, and manufacturing, the Company is going beyond the regulatory regimes and setting high standards for itself on social and environmental matters. Tata Group observes the entire month of June as Sustainability Month.

Apart from sensitising the urgent need for stronger and more effective sustainability initiatives, this year's celebration was also focussed on highlighting Tata Steel's efforts as a responsible business that cares for its environment and strives to achieve better parameters on the sustainability index. The focus for this year was on sustainability and sustainable living, through the Company's endeavours in fighting the climate crisis, saving water, reusing/recycling, and taking strong actions that enable it to walk the talk on sustainability.

IndiGo on a Green mission to conserve water and reduce carbon emissions

Private sector arliner IndiGo is implementing innovative measures to reduce water and fuel consumption on flights, on the occasion of World Environment Day.

The airline has successfully conducted trials with a new water faucet in 200 flights which reduced water consumption by 5.4 ltr/hr. For an average length 138 min flight (as per our trials conducted onboard), we saved 12.42 Ltr of water per flight.

IndiGo currently operates 1500 daily flights with an average flight duration of 98min. This new installation will reduce water consumption by 8.82 ltr/ flight, enabling overall water savings of 13230 Ltr/ Day.

This modification will also solve the challenge of water quantity in long flights. The reduced need for uplifting water in shorter flights will also contribute to fuel savings during operations, reducing carbon emissions by 930.75 Kg CO2/m3 per year. The airline has been working towards an integrated sustainable

approach which can help them with day- to- day operations. IndiGo will be the first airline globally to make these changes for water conservation on board the aircraft. Wolfgang Prock-Schauer, President & Chief Operating Officer, IndiGo said, "As a leading airline, we have a special responsibility towards the environment and ESG is therefore one of our top corporate goals. We are in the process of institutionalising a sustainable approach to operations over the last few years, where-in sustainability is being integrated with day-to-day operations. With this new initiative, we aim to conserve water and significantly reduce carbon emissions through fuel savings. These consistent initiatives will contribute to a healthy ecosystem for our future generations."

Recently, IndiGo published its first ESG Report, IndiGo Green, to share company's outlook towards good governance and an overview of the environmental and social performance. IndiGo is the first airline in India to work towards good governance and an overall improvement in environmental and social performance. The airline has already registered a reduction of 1,478,359 tonnes of carbon emissions from FY '15 to FY '21. In FY '23, the airline aims to reduce CO2 emission by 18% per ASK when compared to FY '16. IndiGo is determined to be a leading airline in the world, focussed on enhancing sustainability.

HCL Foundation Partners with Flipkart Samarth to Empower Rural Women Artisans in Uttar Pradesh

HCL Foundation under its flagship program HCL Samuday, has partnered with Flipkart Samarth to provide livelihood opportunities to rural women in Hardoi district of Uttar Pradesh by reviving existing crafts and skilling through training programs. As part of this initiative, HCL Samuday unveiled Samuday Crafts, which includes a range of handmade products prepared by 500 rural women artisans. During the event, an exclusive range of home decor products namely 'Alankaar' was also launched.

Alok Varma, Project Director, HCL Foundation, said, "The handicraft sector provides an opportunity to create an alternate source of income for rural women, skilled in making traditional handicraft products. Since 2015, as part of its livelihood interventions, HCL Samuday has supported 22,000 women with a range of livelihood opportunities. While close to 2,000 women artisans have benefitted from additional income through our efforts, we realized that the potential could be much higher if we are able to connect them directly to the consumers. Our partnership with Flipkart Samarth is a step in this direction and can be truly transformational for these artisans. This association will help showcase the ingenuity of skilled artisans on a global platform, resulting in increased acknowledgment and remuneration. We expect that the partnership will help artisans to make sales of around Rs. 8,000 to Rs. 10,000 per month directly."

Rajneesh Kumar, Chief Corporate Affairs Officer, Flipkart Group, said, "Flipkart's Samarth initiative was launched in 2019 to support under-served communities, artisans, weavers and craftsmen and provide them access to a national market, using the power of e-commerce. Through this initiative, we have been able to support millions of livelihoods engaged with this program across the country. Under this partnership with HCL Samuday, we are committed to extending the opportunities of the digital economy to these talented women artisans, support their financial independence and build visibility for their local crafts."

Samuday Crafts enables rural artisans to produce and sell products in the categories of home décor, lifestyle, and apparel. It offers a range of crafts like Taat embroidery, natural fiber-based crafts (Moonj, Kans,

and Wheat Grass), hand embroidery (chikankari), block-printing, and tie and dye. The price range of these products starts from Rs 200 and goes up to Rs 3,500. Working together as a group since 2017, these rural women artisans have been enabled to generate revenue of Rs. 3.5 Cr in the last five years, helping them individually earn an average income of Rs. 2500 to Rs. 3000 per month. This additional income is

empowering the rural women in the district with a sense of financial security while helping them become earning members of the household. This is a comprehensive livelihood upliftment initiative where women are empowered, not only through skill development on handicrafts but also on financial literacy, design & marketing linkages. They also benefit from health initiatives under HCL Samuday, thus leading

to holistic transformation. To ensure that rural women refine their craft-making skills, HCL Foundation, over the years, has partnered with Craftizens, Kadam, and Rang Sutra to provide skill training to artisans in multiple crafts. Artisans have also been supported to showcase their work in various exhibitions such as Dastakar, Delhi Haat, Jaipur Lifestyles Festivals, and Heritage, etc.

Wabtec and STEM Learning Partner to Provide Youth Science Centers in India

Wabtec Corporation in collaboration with STEM Learning, celebrated the inauguration of a STEM Science Center at Karnataka Public School located in Dodda Banaswadi.

The program's vision is to build six similar Science Centers across schools in Bangalore.

"This inauguration is an exciting milestone in our partnership with STEM Learning and Government Schools in Bangalore," said Rajesh Ranjan, CSR Leader, Wabtec India. "These Science Centers will nurture interest in STEM careers in young minds. Our hope is that these centers position students for successful careers in STEM-related professions."

Following today's inauguration, approximately 3,000 children from Classes 1 to 10 will have access to these high-quality interactive science centers. This initiative falls under Wabtec's Caring for our Communities program, which is committed to making a meaningful, sustainable impact in the communities where employees live and work. Under the program, students also will receive opportunities to learn, develop and grow through various mentorship programs.

Wabtec Team at the Stem lab at Karnataka Public School Dodda Banaswadi

"We at STEM Learning believe that school education should not be only visual or audio but it is important for children to practically understand STEM concepts. Through our science centres in partnership with Wabtec, we would like to open doors to students to construct evidence-based explanations of real-world concepts. The labs will help deeper absorption of STEM concepts and therefore creating a student-centred learning

environment" said Mahesh Kumar Corporate Relationship Manger STEM Learning. "Wabtec's Caring for Communities program has been working with various partners near our office locations and in states where we operate for several years. We will continue to partner with government schools and explore opportunities to engage kids to enhance their learning experience," added Rakesh Jain, VP, Technology- Digital Electronics.

IIT Madras Targets One Million School & College Students through Course on 'Out of the Box Thinking'

The Indian Institute of Technology Madras will launch a course on 'Out of the Box Thinking' through Mathematics to encourage innovative thinking. The Institute is targeting as many as One Million School and College students, besides working professionals and researchers as well through this course, which is a first-of-its-kind initiative in the country.

These courses will be offered in Online Mode free of cost through IIT Madras Pravartak Technologies Foundation, sec 8 company of IIT Madras, which will also issue the Grade Certification for students who take the examinations at a nominal fee. The final examination will be a proctored one conducted at centres in select cities across India.

The Course is being made available in online mode, free of cost, to everyone in India as well as in foreign countries. The four graded independent levels of the courses will be easily accessible to students, professionals and researchers.

The First batch of the course is scheduled to commence on 1st July 2022. Registrations will close on 24th June 2022. Those interested can register through the following link - https://www.pravartak.org.in/out-of-box-thinking.html

Explaining the need for such courses, Prof. V. Kamakoti, Director, IIT Madras, said, "This course is first-of-its-kind in India and will make a major impact in the days to come. We will see the benefits of this course in next few years. The course is being offered free of cost. It course will greatly benefit the School and College students, especially those residing in

Harish Kohli President & MD Acer India, Dr. K Bhujang Shetty Chairman & MD Narayana Nethralaya, Retd. Grp. Capt. S K Mittal VSM, CEO of Narayana Nethralaya.

rural India." Further, Prof. Kamakoti said, "'Out of the box' thinking is solving problems through an indirect and creative approach, using reasoning that is not immediately obvious and involving ideas that may not be obtainable by using only traditional step-by-step logic. In this unique course, such thinking is emphasized through rediscovering the known and unknown facts of mathematics logically with an interesting broader perception of sthe manner of doing it." The course will present multiple approaches to problem solving, debunking a myth that problem solving is only for a select few. It will introduce new techniques in an easy-to-understand fashion, preparing users to face real-life projects with confidence and ease.

With logic being the undercurrent in the study of mathematics, it is essential to develop broader thinking, through its applications in the expanding world of technology. From solving a fun Sudoku puzzle to completing an important scheduled

project, the logic of working is much more important than the arithmetic involved in it. This requires creative thinking and a broader perception that is often known as 'out of the box' thinking.

The Courses will be taught by Mr. Sadagopan Rajesh, Mathematics Educator and founder-director of Aryabhatta Institute of Mathematical Sciences. He has been teaching Mathematics for the past 30 years among a various range of students, both school and college, from age 10 years, motivating them with a variety of creative and designed courses. He has also been conducting nurture programs from primary to high school students, inculcating in them a love for problem-solving, thus leading to Mathematical and other Olympiads.

Speaking about this initiative, Sadagopan Rajesh said, "If we approach mathematics with discipline and passion not necessarily in a formal way but realize the subject with more logical and analytical reasoning, we can broaden our thinking. The important output is the development of skills which are essential to fit and effectively contribute in a rapidly changing technological world."

Mr. Sadagopan Rajesh has been a resource person for several Mathematical Olympiad exposure camps at regional, national, and international levels, apart from conducting several teacher orientations and enrichment programs. C

CSR INDIA UNITED

PinnacleWorks Conducted a CSR drive to provide the underprivileged with food and essentials, impacting 500 lives

PinnacleWorks, a global provider of AI-Powered SaaS-Based Products has announced its latest CSR initiative to cater to the nutrition requirements of the underprivileged. The brand has successfully organized a food drive as a part of the company's CSR activity.

Steered by the HR department the initiative witnessed participation from the employees and leadership team of the company. Over the period, compassion has become an integral part of a company's startup culture. The initiative was designed along similar lines to impart positive feelings among the employees. The drive was conducted at Ghata village in Gurugram, in the presence of both the co-founders Sarvagya Mishra and Ankit Ruia along with other team members.

Packets of biscuits and juices were distributed among 500 odd people including children and adults who are living in challenging conditions.

"In the current scenario wherein inflation is touching heights it is becoming more than challenging for the underprivileged to survive each day. On the other hand, leading day-to-day lives, a lot of people forget to count their blessings, and somehow feel stressed from tackling daily errands. We understand it is imperative to connect with the ground reality, do our bit and feel blessed for what we have. This helps one inculcate a lot of values and grow as a person. This concept also forms the foundation of our culture as a company. Therefore, with this initiative we have just made a little effort to revisit the thought," said Mishra.

The drive also included the voluntary donations of clothes by the employees of PinnacleWorks. The company stated that it is one of the many ways it aspires to raise the community and shall continue to do the same in the future.

Avashya Foundation organises Mango Mania Festival to support environment and rural livelihood

Avashya Foundation, the CSR arm of Allcargo Logistics, hosted Mango Mania, its annual mango festival at the Allcargo Logistics office in Mumbai on June 10 to celebrate the flavour, fragrance and taste of the king of the fruits. At the day-long celebration, the farmers from Karjat and Mokhada in Maharashtra sold more than 1000 dozens of mangoes to Allcargo employees. The yearly occasion is a part of Avashya Foundation's Maitree initiative which aims to promote environment conservation and support livelihood generation among communities from the rural areas of Maharashtra. The mangoes sold at the festival were produced by the trees planted under Maitree.

While commenting on the success of Mango Mania, Arathi Shetty, Non-Executive Director, Allcargo Logistics said, "Mango Mania is one of the many high points of Maitree. The festival is a testimony to our commitment to support rural communities by encouraging them to plant trees for conserving the environment and generating sustainable livelihoods. The encouraging response from our colleagues at Allcargo at the annual festival has further strengthened our resolve to plan a more widespread roll-out of Maitree with a goal to plant 1 million trees by 2024 and support the beneficiary communities to market the produce effectively. We continue to organise such initiatives to make people in our company aware of the importance of environment conservation and the goal of Maitree to make farmers self-reliant sustainably."

To support and build deeper association with the target communities through Maitree, Avashya Foundation collaborated with Mumbai-headquartered Light of Life

Trust and Mokhada-based Diganta Swaraj Foundation, both working towards empowering underprivileged rural communities. The inclusive engagement helped farmers become aware of the various aspects of the lifecycle of a tree, the effective use of water, prevention of attacks from bugs and animals, etc., and monitor the growth of trees. The experts also helped them form co-operative societies so that the beneficiary

communities were able to market their produces at good rates.

Maitree has so far supported 15,000 farmers in Maharashtra and under the project, 717975 fruit bearing saplings have been planted and subsequently nurtured in Karjat in Raigad district and Jawhar and Mokhada in Palghar district. A mixed range of 11 tree species have been planted to promote environmental biodiversity in those regions.

Teenage Visionary Tarini Kapur joins hands with Government School and Panchayat Ghar of Nainital District

Digital development enabler and facilitator to children's education in the rural areas of north India, Tarini Kapur, tied up with another government school and Panchayat Ghar in Naukuchital, District Nainital, for students' better access to modern education.

Tarini Kapur, under her landmark initiatives; Star in Me and It Takes a Village, will equip both the facilities with books, stationery, educational toys, STEM kits in Hindi and content developed under the Star In Me programme. Besides, as Tarini always envisions education as a wholesome learning experience that emphasises grooming skills that one receives as a cultural legacy, she will also conduct craft workshops under the Cone of Vision programme.

In the last two years, Tarini has equipped and revamped 4 public facilities with holistic educational resources and a wholesome learning environment. While briefing about the past and future activities, Tarini Kapur, said, "We have re-modelled the four public setups into modern education facilities so far. Two last year and two this year as well, so far. Two more centres we are planning to start soon; a government school and Panchayat Bhawan of Noal Gaon. In addition, we are also having discussions with the authorities of a community cultural centre as a potential resource centre for local kids."

Tarini started helping underprivileged school-going children in rural India through 'Star in Me' (YouTube Digital Library and App) to address the issue of the digital divide. This learning resource uses audio visual learning modalities. Tarini has done over 1200 hand drawn illustrations and used the vernacular hindi

narrative to teach children. The app has been channelized through teachers of 7 villages and over 40 NGOs have been contacted using the app with the students they are working with. Tarini's second educational-cum-social initiative is "It Takes a Village." In this project, Tarini mobilized local support and voluntary donations to set up the 'Panchayat Ghar' (facility for meetings of the village administration) as a Resource Centre in the village, equipped with furniture, books, printer and copier facility, an electricity connection, smart tablets, etc.

Tarini has also supported village students through skill enhancement and craft-based programmes. Cone of Vision, a project initiated by Tarini Kapur is based on skill development and self-sufficiency for students from grade 3 to grade 12. An innovative application of the indigenous 'AIPAN' craft was envisaged on the locally abundant pine cones was to develop urban -chic products with a great souvenir. Till date, students have sold nearly 750 products, priced between Rs 200-1800 at various tourist hotspots and hotels.

Mumbai Urja Marg to expand potential of Mumbai's youth in skill development

Mumbai Urja Marg, a critical transmission infrastructure project coming up in Mumbai, announced partnership with Siemens Aikya Education & Welfare Trust to initiate a skill development and training programme for youngsters in Mumbai. Aligned with the government's vision of 'Kaushal Bharat-Kushal Bharat', this initiative will aim to train more than 200 youngsters, in phases, in the Mumbai Metropolitan region. With an aim to make them job ready, the training program will offer youngsters a chance to pursue industry-relevant skill training that can assist them to obtain sustainable livelihood opportunities.

The programme was inaugurated today at Neral in the presence of Ninad Pitale, Project Director-Mumbai Urja Marg; Rajesh Sharma-Secretary and Treasurer, BJP Kalyan Badlapur Region; Avinash Bhopi, Corporator- Kulgaon Badlapur Nagar Parishad; Ashok Rane, Chairman-Siemens Aikya Education & Welfare Trust; Girish Ashtekar, Secretary-Siemens Aikya Education & Welfare Trust and a prominent social worker, Haresh Dhule.

The first batch of the training program will be composed of 20 students, shortlisted through an entrance test. The shortlisted students will go through a three-week rigorous training program that will involve a mix of practical and theoretical modules to acquaint them with the basics of electrical training. The training pedagogy has been designed to help the students acquire the required skill set to start working in electrical workshops and with contractors. On the successful completion of the course, the

trainees will receive a certificate as well as career counselling and placement assistance.

Hritik Arun Virle, shortlisted student in the first batch, said, 'It is a great initiative for youngsters like me. I had the basic knowledge of electrical training but with this training program, which is a mix of theory and practical, the knowledge would be complete and will make me job ready.

Another student, Yash Kailas Bhoir said, 'I am grateful to the organizers, local administration for starting this kind of job-focused training program. The training would help

us become skilled and open up numerous possibilities for us.

Speaking on this initiative, Ninad Pitale, Project Director, Mumbai Urja Marg said: "We, at Mumbai Urja Marg are committed towards making a positive social impact on the communities wherein we operate. Our core purpose of providing skill development training to unemployed and underprivileged youth is to create opportunities for them so that they can attain their full potential. We have started with the first batch and in future more batches would be added to ensure a wider reach and impact".

Bharat Rural Livelihoods Foundation to work with Human Development Commissionerate to Improve Human Development Index in the Vidarbha region

Bharat Rural Livelihoods Foundation (BRLF) (BRLF), in partnership with the Human Development Commissionerate (HDC), the Government of Maharashtra, has launched a high-impact Human Development Index Project to improve the quality of life in poor-performing Talukas of Vidarbha region starting from 1st May 2022 to 30th April 2023.

The project will focus on proper monitoring and effective implementation of the existing schemes for the education and health of the HDC department. It will also enable deeper engagement with the poor community in a cluster approach to planning and implementing smart, innovative best-suited livelihoods interventions.

The project's overall goal is to improve the Human Development Index of 25,000 poor households in the first phase (10,000 new and 15,000 in the Tribal Development Department project) residing in Yavatmal, Gadchiroli Nandurbar-Dhadgaon, Nandurbar-Akkalkuwa and Gondia districts of Vidarbha region, Maharashtra.

The project would be implemented in a phased manner; the first phase would be one year, from 1st May 2022 to 30th April 2023. After completion of the first year, a joint review will be conducted, and based on the project's outputs and outcomes, the decision will be taken for two years, which will start from 1st May 2023 to 30th April 2025.

Speaking about the implementation of the project, Kuldeep Singh, Chief Operating Officer, BRLF, said that this project will be implemented in 23 blocks of Maharashtra by six civil society organizations (CSOs) in partnership with the Tribal Development Department and Human Development Commissionerate, Government of Maharashtra. The project is expected to leverage Rs. 56 crores from various schemes under HD Department benefitting 25,000 households.

The project is expected to:
1. Improve the living standard and well-being of 25,000 poor households
2. Improve the well-being of women and adolescent girls by addressing the gender-based inequities
3. Ensure effective implementation of ongoing health and education schemes
4. Provide technical support to the HDC department for the implementation of livelihoods interventions, especially in agriculture, Non-Timber Forest Produce (NTFP), and natural resource management.

Talking about this collaboration, Nitin Patil, Commissioner, Human Development Department, Government of Maharashtra, said that the HD department would cover ultra-poor households in the selected blocks through this project. Our partnership with BRLF would help facilitate knowledge management, implementation, and coordination with CSOs and set up monitoring and evaluation frameworks. The HD department will coordinate with line departments like MGNREGA, Public Health and Engineering Department (PHED), MAHIM, State Rural Livelihood Mission (SRLM), Water Resource Department (WRD), Forest, Horticulture, Agriculture, Animal Husbandry, Fisheries, and other related State Government Departments for creating convergence in livelihood options for the targeted households.

In Maharashtra, BRLF is implementing another high-impact livelihood enhancement project focusing on tribal-dominated Talukas of the Vidarbha region in partnership with the Tribal Development Department (TDD), the Government of Maharashtra, and CSO partners. Under this State partnership project, targeted interventions are planned to improve the livelihood conditions of the 15,000 most vulnerable ST households. This project was co-created and conceived in consultation with Shabari Adivasi Vitta Va Vikas Mahamandal Maryadit.

Since the HD project will be implemented in the adjoining Talukas where the Tribal Development Departments' (TDD) project is undergoing, the team deployed for TDD would be the nucleus and center point for the additional team. The TDD team leader will lead the project and provide all guidance and necessary field support to the team deployed in adjoining Talukas. The 3-member team comprises three professionals who will look after the 2 Talukas under the supervision and guidance of the TDD team leader. Altogether 15 units would be deployed to implement this project comprising 92 human resources.

The HD project would be implemented in a phased manner; the first phase would be one year, from 1st January 2022 to 31st December 2022. After completing the first phase, a joint review will be conducted, and based on the outputs and outcomes of the project, a decision will be taken for the second phase of two years, which will start from 1st January 2023 to 31st December 2024.

THE WORKPLACE OF THE FUTURE:

SMART, SUSTAINABLE, HOLISTIC

As organisations navigate new working arrangements in 2022, how can technology help to shape green, welcoming workplaces of the future?, writes Nika Dhankar Rhoonholm

Sophisticated new solutions have emerged to tackle the new realities of post-pandemic work arrangements, including staggered work occupancy, greater sustainability targets, and health and hygiene concerns.

The workplace as we know it has evolved dramatically during the Covid-19 pandemic, expanding into our homes and complex digital-physical spaces. As organisations and their employees continue to navigate hybrid working arrangements this year, how can technology help to shape green and conducive workplaces of the future?

Many new innovations are aimed at helping workplaces save energy. While energy efficiency may not be the snazziest of climate solutions, it remains a potent and cost-effective way to slash emissions without major reworks of existing infrastructure. The International Energy Agency (IEA) has projected that low-cost measures, such as better ventilation and LED lighting, if implemented globally, could slash 3.5 gigatonnes worth of carbon emissions a year.

The savings would amount to 40 per cent of the emissions that need to be abated to limit global warming to 2 degrees Celsius. With the increased focus on climate mitigation, energy efficiency solutions for the built sector is now a US$340 billion market globally that is set to grow by over 8 per cent through 2027.

In addition, in Singapore, energy efficiency incentives like the Green Mark Incentive Scheme are encouraging companies to pursue smart, sustainable and predictive solutions in the workplace. Companies are paying closer attention to their carbon footprint to support sustainability goals, and this requires more tools to monitor and optimise utilities consumption.

These tools usually come in the form of building intelligence systems, such as SP Digital's GET Control. The system uses AI and IoT to optimise and regulate air-conditioning and maximise energy efficiency in real-time, based on changes in occupancy, current weather conditions and forecast data. The smart damper system, for example, divides large open-plan office spaces into micro-zones to enable better air-flow distribution and control. With predictive intelligence working together with all the sensors and smart dampers, data is sent wirelessly to a central control unit that recommends and adjusts the dampers dynamically such that the desired temperatures are met, making the office energy efficient and comfortable.

Clement Cheong, SP Digital's vice president of sales and customer operations, says that GET Control responds to the needs of corporate real estate owners and commercial landlords in Singapore.

"Landlords are seeing more occupants coming into work and at different times," he says. "They need to adapt their buildings and systems to cope with this change dynamically. For example, they do not need as much cooling or fresh air supply at non-peak or low occupancy periods."

Moreover, he adds that the pandemic has also made employees even more conscious of indoor environmental quality. "They want to have visibility into IAQ (Indoor Air
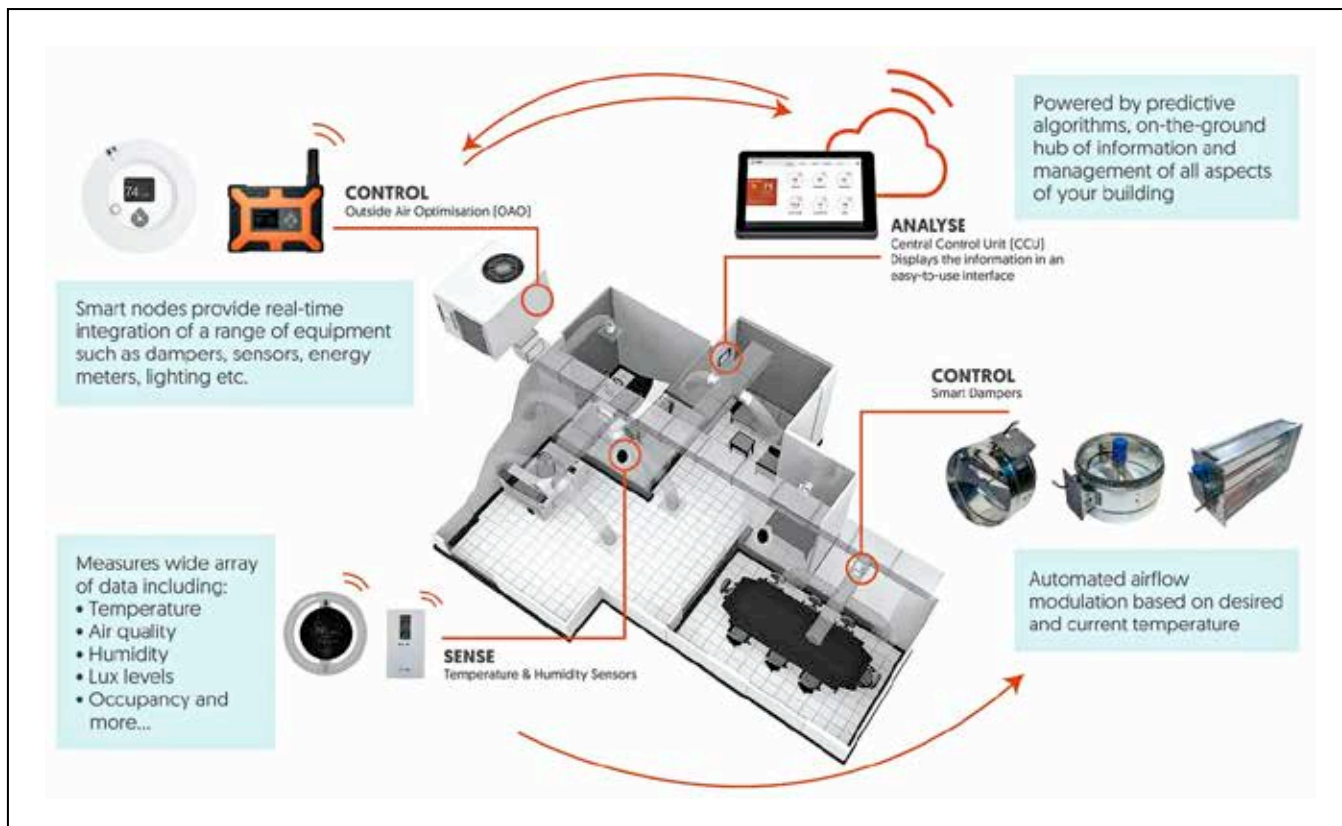
GET Control's Dynamic Airflow Balancing in real-time is suitable for brownfield and greenfield projects. *Image: SP Digital*

Quality) and the building's measures to monitor and improve IAQ. Even though occupants may spend less time in the office, they want a better, healthier indoor experience."

He explains that currently, building owners or tenants have limited visibility into indoor air quality in offices and limited ability to intelligently control it. Traditional air side control and management technologies tend to be "reactive", that is,

facility managers make adjustments when occupants complain of any indoor thermal discomfort. Because such technologies do not take into account dynamic changes in ambient temperatures, they are not as energy efficient as a system with real-time tracking capabilities like GET Control.

He shares a case study from an educational institution in Singapore, where facility managers were faced

with frequent occupant complaints about hot and cold spots in the office. Besides the fact that facility managers had to make time-consuming manual adjustments, the building's cooling efficiency was poor, resulting in high energy use and carbon emissions. When SP Digital's GET Control was deployed, the site saw more than 30 per cent airside cooling energy savings, enhanced thermal comfort and indoor air quality for employees, and improved operations and productivity.

On a larger scale, some multinational corporations are leading the way in greening their offices, and their examples might provide insights into the future of the sustainable workplace. One of them is Meta, which operates the social media platform Facebook and aims to achieve a 50 per cent reduction in carbon by 2030. At its 260,000 square-feet office in Singapore, spread over four floors at Marina One Tower, this target has translated

> **Building owners or tenants have limited visibility into indoor air quality in offices and limited ability to intelligently control it. Traditional air side control and management technologies tend to be "reactive", that is, facility managers make adjustments when occupants complain of any indoor thermal discomfort.**
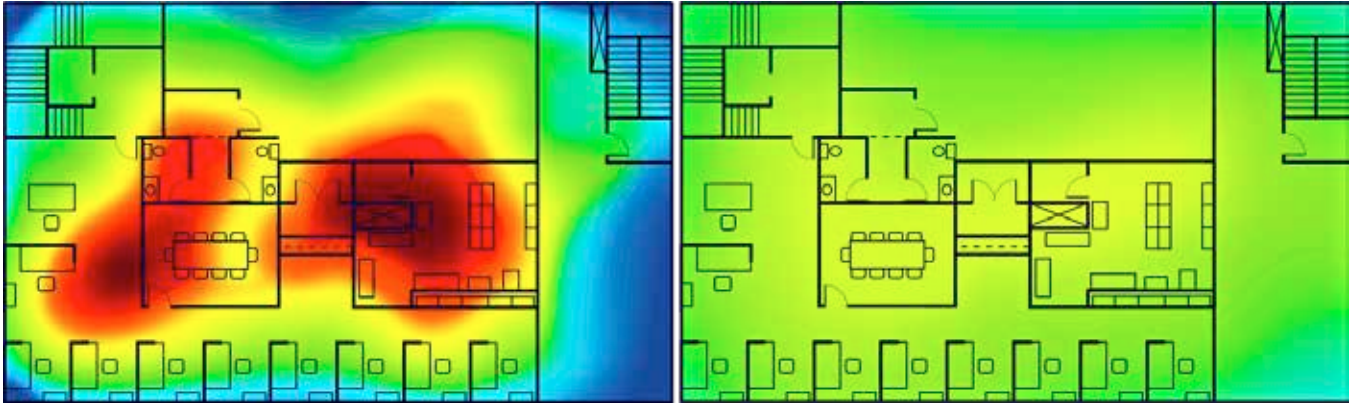
These heat maps show how air temperature is regulated by GET Control. Left: Before implementation, there are hot and cold spots in the office. Right: After implentation, the office is evenly cooled. *Image: SP Digital*

into environmental control systems that use the latest in automated sensor technology, which can optimise even the smallest indicators of energy efficiency. Numerous sensors are in place to measure temperature, air, light and motion open spaces, meeting rooms and lifts.

Apart from office management, Meta Singapore also uses technology to assist employees to adopt carbon reducing behaviours, and, while in the workplace, to holistically analyse their carbon footprint across the product supply chain, recycling, water and waste management.

Looking ahead globally, the journey to make buildings more sustainable will be a long one. Currently, the built environment is responsible for nearly 40 per cent of all greenhouse gas emissions in the world. According to a report by the International Energy Agency (IEA), the 2020 pandemic caused a drop in the buildings sector carbon emissions, followed by a moderate rebound in 2021, but buildings are not on track to achieve carbon neutrality by 2050.

In Singapore, energy efficiency remains a core tenet of the city-state's decarbonisation pathway, even as longer-term solutions such as carbon capture and clean energy imports are being considered for the next few decades. Power generation firms are provided subsidies to upgrade their turbines and software; a similar fund is in place for build-

ing owners to buy more efficient air-conditioning systems and install motion sensors that automatically switch off appliances when not needed. Buildings contribute close to 15 per cent of Singapore's na-

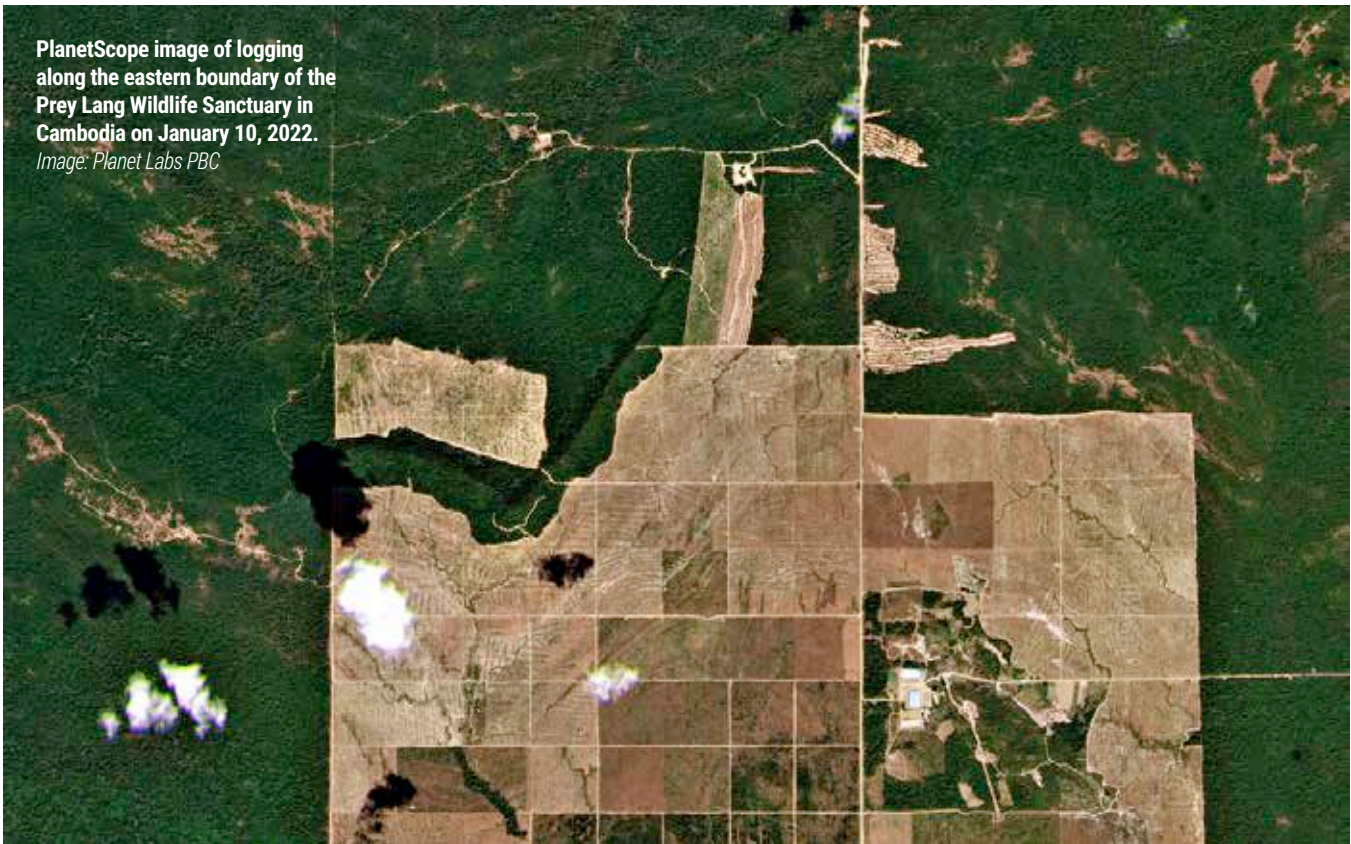tional emissions — the high fraction resulting from the almost complete urbanisation of the island-state.

As part of its efforts to reach net-zero emissions around 2050, the government wants 80 per cent of buildings in Singapore – both old and new – to adopt energy efficiency measures by 2030, up from 50 per cent today.

There is growing awareness among businesses that greening their offices makes economic and environmental sense. The Singapore Building and Construction Author-

ity's Green Mark Incentive for Existing Buildings – a $100 million fund started to co-sponsor the adoption of energy-efficient technologies in existing buildings – has been fully committed, as has a separate $50 million

> **On a larger scale, some multinational corporations are leading the way in greening their offices, and their examples might provide insights into the future of the sustainable workplace. One of them is Meta, which operates the social media platform Facebook and aims to achieve a 50 per cent reduction in carbon by 2030.**

fund which does the same for small and medium enterprises.

This suggests that more landlords in Singapore understand that the initial outlays of such green investments may be high, but returns in the long run justify the cost, given the changes in expectations of workplace experience, energy efficiency and sustainability in post-pandemic times. C

(Source: https://www.eco-business.com/news/the-workplace-of-the-future-smart-sustainable-holistic/)

PlanetScope image of logging along the eastern boundary of the Prey Lang Wildlife Sanctuary in Cambodia on January 10, 2022.
Image: Planet Labs PBC

PROTECTING THE PLANET WITH ALL-SEEING EYES IN SPACE

Earth imaging is a booming industry that is set to triple in size this decade. Eco-Business speaks to an executive at one such venture about the promise of greater transparency and accountability in addressing sustainability issues.

Aconstellation of tiny satellites in space could now be monitoring the daily movements of illegal loggers, and the health of acres of pristine rainforest.

In another continent, governments could be reviewing pictures of local farms to check if they planted cover crops during off seasons to keep soil carbon emissions down.

It's a level of monitoring that until recent years was but a dream for public agencies, researchers and conservation groups, as environmental damage continued around them, seemingly immune to stronger laws and boots on the ground.

But commercial satellite imaging is now a US$2.6 billion industry that is set to grow almost three-fold by the end of the decade, according to analytics firm Allied Market Research. Orbital launches are becoming an increasingly accessible private venture, as aerospace firms shrink satellite payloads to the size of shoeboxes, allowing them to be deployed in swarms.

Such firms now share the space with huge public agencies like the United States' National Aeronautics and Space Administration (NASA) and Europe's multilateral space agency ESA, which once was the sole custodian of spacefaring.

The rapid advancement of satellite imaging technology could provide better data and more ammunition for environmental defenders to go after culprits. But not everyone can afford to buy satellite pictures — especially not the poorest, who may be the hardest hit by climate change.

Eco-Business spoke about these issues with Kevin Weil, president of product and business at Planet, a firm that has sent over 200 small satellites into space to photograph almost the entire world once a day.

What are some of the new uses of satellite imagery in the fields of sustainability and climate change?
Fundamentally, it is about ground truth, about how the world is evolving. It is applicable to a whole bunch of different industries.

You can think about agriculture, where a farmer used to be walking in his fields to understand how the crops were growing or where there was blight. Now we can do that automatically through satellites. We can do it not just for one field, but for every field across the whole world.

Europe has the Common Agricultural Policy, that is incentivising farmers to grow crops more sustainably, through practices like

Kevin Weil, president of product and business at Planet, speaking at Geo Connect Asia, a trade conference in Singapore. *Image: Planet Labs PBC.*

cover cropping. A lot of European countries are using Planet's data to automatically verify that farmers are following these sustainable best practices. Governments are automatically paying farms based on our data.

We also have machine learning and artificial intelligence algorithms that identify where roads and buildings are being built, to ensure that they are being built in a sustainable way.

Our technology can even be applied in the world of finance. We have forged a relationship with Moody's, where they use our data to help them measure Environmental, Social, and Governance (ESG) best practices for financial institutions and businesses around the world.

Do you have examples of when Planet's satellite imagery has been used to successfully fight deforestation?
We work with Norway's International Climate and Forest Initiative (NICFI) to provide a dataset of the world's tropical forests as a digital public good, free for researchers around the world. It covers basically every tropical forest in the world between 30 and negative 30 degrees of latitude.

This programme is now issuing 10 times the number of citations for illegal deforestation than they were previously.

It is incredible what people are doing with the data. We also have a partnership with Mapbiomas, which is using the data and working with governments to penalise people who are deforesting illegally.

One more thing that is really cool – in Brazil's rainforests, deforestation is frequently caused by narcotics traffickers. They will build roads deep into the Amazon, and then they'll clear a runway to transport drugs. If you can catch the deforestation as it begins, you can intercede and stop both deforestation and drug trafficking.

A common lament about climate mitigation is that not enough is being done. How does better satellite imagery help address this?
There is the common saying that you cannot manage what you cannot measure. Our satellite imagery gives people daily data about the Earth and how it is changing. That is the first step.

The data also creates a shared accountability. We are part of the Allen Coral Atlas, where we use our data to map corals everywhere in the world, including the type of corals on a reef. Having done that, about 10 companies have protected their marine coral areas since.

It is not that these companies didn't know they had corals in their space, but that now everyone else knew they are there, so suddenly there was accountability and the pressure to act. Even just having this data out there leads to action.

How do you ensure that the satellite imagery you provide does not help to boost surveying and exploitation of Earth's natural resources instead?
The answer is largely the same – we create transparency and shared accountability. If someone were to use our data for something that runs counter to making our world a more sustainable place, we are hoping

> **There are physical limits to how granular you can get from space, and I think aerial imagery and drone imagery run into privacy issues quicker than satellites.**

to make that visible. As the world increasingly values sustainability, people are going to push back and help us more in a positive direction.

How do you balance providing quicker, more regular and higher resolution satellite imagery with the privacy rights of landowners?
Our smallest satellites have a resolution of about three metres per pixel. That means a square three metres each side turns into a pixel. You and I are much smaller than a three-metre square. So we cannot identify humans, nor license plates or newspapers. A lot of these privacy issues don't come up as a result.

There are physical limits to how granular you can get from space, and I think aerial imagery and drone imagery run into privacy issues quicker than satellites.

How do you decide what satellite imagery to release as free open-source data, and what you monetise?
A lot of times it has to do with the latency of the data. For NICFI, we are providing monthly maps. In June, you might get maps from May. A 30-day delay is still perfect for research and learning. We build our business around companies and governments that need access to real-time data.

We love offering our data as public good, we believe it benefits researchers around the world, and that benefits people around the world. We had something like two peer-reviewed papers published every day citing Planet data in 2021. Now there are over 2,000 papers in total.

In these instances, we generally work with partners pro bono, we just look to cover our costs. NASA, for example, has sponsored our data to put it in the hands of researchers and graduate students all over the United States.

We are a public company, and a Public Benefit Corporation. Our

responsibility is both to shareholders and our public benefit statement, to "accelerate humanity toward a more sustainable, secure, and prosperous world, by illuminating environmental and social change". We have to build a busi-

Palm oil plantation in Sumatra, Indonesia. *Image: Planet Labs PBC.*

ness, obviously, so that we can be around to achieve the mission. But I think we have found a good balance.

Small farmers operating off the grid in Asia are often the worst affected by climate change. How do you ensure that your products benefit them?
Smallholder farmers' fields are often narrow, and to help them understand what is going on, you need higher resolution imagery.

This is where some of the public data we issue come into play. For example, Indonesia is a member of NIFCI. So you have researchers and local governments in Indonesia who are able to access this data, study it and provide value to smallholder farms.

Commercially, we work with some of the biggest agricultural companies in the world, who themselves have those farmers as clients. So they take our data and use it to provide information, through perhaps farmers' mobile phones, for them to understand how their crops are doing. So there are multiple ways

in which those farmers can benefit from our data.

We can't solve every problem directly, and we know that our data is going to have more impact if we can work with a network of partners all over the world, who can then build products that directly address what their customers need.

Satellite imagery has traditionally been provided as a public good by government agencies, such as NASA and ESA. How do you see the relationship between public agencies and the private space sector evolving as the private sector grows?
The relationship is really strong. We work closely with NASA, ESA and many other space institutions around the world.

I think increasingly, government organisations are realising the value of commercial satellite constellations. They can learn a lot from it, benefit from the data, and it means they don't have to spend their money doing something that the commercial industry is already doing. They can spend their money doing things that are not yet commercially feasible, such as new sensors and new experiments, and the commercial side learns from those trials.

It is not a zero-sum game. We use data from NASA and ESA satel-

lites where their data is better, for example, in finer calibration. We use that to improve our satellites' data, and ultimately offer a better product to customers and researchers. There is an exchange of value going in both directions.

What are the next big things Planet is working on?
We are working on two new constellations of satellites. One is called Pelican, an updated version of our high-res satellites. When it is launched, we expect that it will be able to do 30-centimetre resolution imagery, and offer data faster.

You are not going to be able to identify a person still at that resolution, with the satellite 325 kilometres above the Earth. We won't be the first people to have a 30-centimetre resolution satellite, so we have an opportunity to learn from the folks who have gone before us.

We are building the other constellation to measure well into the electromagnetic spectrum that humans cannot see, to detect, for example, carbon dioxide and methane point sources. It will be able to detect pipeline leaks, and measure biodiversity in new and interesting ways.

On the software front, we are using artificial intelligence and machine learning to help extract insights, highlight changes, notify people of anomalies.

What strikes you the most when you look at satellite images of the Earth?
You don't see borders, not country borders, not state borders. You just see the world. It is a reminder that we all share this one planet together. You also see such variety around the world – beautiful landscapes that you could not have imagined. It drives home the point that we have this one planet to protect and preserve. ⊡

A diver explores Bunaken National Marine Park in Sulawesi, Indonesia.
Image: Christian Gloor, CC BY-SA 3.0, via Flickr.

MOBILISING COMMUNITIES TRUMPS PENALTIES IN PROTECTING SEASCAPES: STUDY

Giving Indigenous peoples and local communities a say in the design and management of marine protected areas boosts conservation outcomes, a new study indicates, says **Julia John**, Mongabay.com

Conservationists have long recognised the significance of engaging locals in safeguarding the ecosystems they live off, but assessing those relationships can be hard because of time and resource constraints. Now, an international research team has parsed how such involvement — more so, they say, than penalties for violations — shapes the success of a swath of multi-use protected areas in eastern Indonesia, which allow restricted resource extraction.

Published in May in Science Advances, the study set out "to gain a quantitative understanding of how governance — that is, how formal and informal institutions manage resources — impacts conservation outcomes," said first author Robert Fidler, a postdoctoral associate in biological sciences at Florida International University. "Conservation initiatives are more effective when they actively incorporate, and treat fairly, the people that they impact."

Applying more than a decade of data from the Bird's Head Seascape, a region in the biodiversity hotspot known as the Coral Triangle, the researchers looked at hundreds of places in four marine protected areas (MPAs) where fishing occurs legally. These MPAs were the Kofiau-Boo Islands, Misool Selatan Timur, Selat Dampier and Teluk Mayalibit.

The team analyzed fish biomass and community-run surveys to determine how variables like livelihood and association with local groups affected biomass changes, after accounting for environmental factors using non-MPA control sites.

Fish biomass was greater when Indigenous peoples and local communities (IPLCs) were "more involved in decision-making and had more local management rights that were supported by governmental authorities," Fidler said, adding that perhaps it was because participation bolstered the "perceived legitimacy of, and compliance with" resource-related rules. Likewise, biomass was larger when penalties reflected the seriousness of transgressions and rose for repeat offenders.

However, "where decision-making participation and management rights were low, the frequency of penalties for noncompliance was often high, and we tended to see worse outcomes," Fidler said. This suggests that protected areas reinforced mainly through penalties can be less effective than those that IPLCs help manage closely.

> **❝**
>
> **Conservation initiatives are more effective when they actively incorporate, and treat fairly, the people that they impact.**
>
> **ROBERT FIDLER**
> Postdoctoral Associate, Florida International University

According to study co-author Estradivari, an Indonesian researcher at the Leibniz Centre for Tropical Marine Research in Germany, "multiuse MPAs that incorporate diverse governance principles and active community participation can increase fish biomass while also delivering social outcomes," such as decreased conflict, greater income, and stronger conservation awareness. The paper challenges long-standing concerns about whether multiuse MPAs inherently can't safeguard declining ecosystems, she said.

The project was led by the Alliance for Conservation Evidence and Sustainability, a coalition of NGOs and universities seeking to foster evidence-based decision-making in community-based conservation.

Lessons for Indonesia

Indonesian conservation experts say the study offers actionable insights for accomplishing MPAs' social and environmental objectives, including meeting the UN Sustainable Development Goals.

Currently, Indonesian MPAs are predominantly managed top-down, so "these findings highlight the importance of the government strongly promoting co-management approaches by involving local communities," said Estradivari, formerly a marine conservation coordinator with WWF-Indonesia.

The government hit its 2020 marine protection target by establishing more than 200 MPAs — without centring IPLCs, Estradivari said. For 2030, it has pledged to protect 3 per cent more of the nation's oceans while enhancing existing MPA management.

"Actively involving IPLC[s] in all stages of MPA implementation, including decision-making processes, will be critical to improving the[ir] sense of ownership, increasing compliance and improving management effectiveness, while also protecting their rights to marine resource management," Estradivari said. Since her fellow authors include policymakers and others who aid in implementing MPAs, she said their findings can inform what happens nationwide.

Unlike MPAs designated purely for ecological preservation, multiuse MPAs retain a limited amount of fishing. Because more than one-fifth of Indonesians depend on seafood, "multiuse MPAs are seen as the ideal conservation tool for the country," where they go back roughly five decades, Estradivari said. Since reconciling biodiversity conservation with resource consumption can be tough, she said, evaluating and replicating their successes is vital.

"In the near future, I expect to see more and more successful multiuse MPA implementation," building on

community engagement work that has expanded over the past decade, she added.

Greenpeace Indonesia campaigner Amos Sumbung, who was not involved in the study, said the government should consult neighbouring IPLCs as soon as it starts planning an MPA.

Eghbert Elvan Ampou, a researcher with the Institute for Marine Research and Observation at the Ministry of Marine Affairs and Fisheries, said there was a need for "upstream-to-downstream collaboration" across government, academic institutions, NGOs and community monitoring entities. Focus groups could ensure these different stakeholders share a vision for implementing MPAs, he said.

Criticism

Scientists who weren't part of the study noted that it had certain strengths, but they also identified a few issues with it.

Ampou, for instance, questioned any downplaying of law enforcement and called for "severe sanctions" to deter MPA violators and secure resources, particularly along coasts.

Brock Bergseth, a research fellow at James Cook University in Australia, described the paper as "a really interesting take" on the management of common pool resources — those that are openly accessible but finite — considering many potential variables associated with MPA outcomes at a large scale. However, he similarly noted that "participation alone is not a silver bullet," with people sometimes committing offences by exploiting the knowledge they gained as participants.

Moreover, the methodology's "Achilles' heel" is its failure to connect equitable governance to augmented fish biomass by zeroing in on fishing activity, Bergseth said. "When you're trying to demonstrate causality between a governance and an outcome, you actually want

to measure human behaviour." Otherwise, a bevvy of confounding influences, such as environmental conditions, casts uncertainty around whether MPAs positively shift behaviour and boost fish populations, he said. Generally, compliance is "the exception rather than the rule," he said, and the lower biomass in some of the study locations points to "quite high levels of noncompliance."

Using biomass as a proxy for fishing contributed to the researchers' inability to explain heavy variation across their sites, Bergseth added. Although difficult, ways to gauge fishers' compliance across extensive areas included questionnaires, camera surveillance and discarded fishing equipment counts.

Global implications

Despite its limitations, the paper's takeaways supplement the global conservation discussion.

According to Estradivari, it indicates empowering locals is neces-

sary to fulfil conservation aims in Indonesia, the Coral Triangle and throughout the world, especially the UN Convention on Biological Diversity's target of setting aside 30 per cent of lands and waters by 2030.

As multiuse protected areas spread worldwide, Fidler added, "to effectively manage them, we must understand how to protect ecosystems while still allowing for use by people."

He noted that the study's conclusions are broadly applicable to any protected area where IPLCs harvest resources. "Making sure to include the people that rely on those resources in the design and implementation of management strategies, and making sure the rules around management are fair to them" is crucial everywhere, he said.

The paper aligns with prior literature showing that IPLC-overseen natural landscapes are disappearing slower than others, Fidler said. "It adds to this growing body of evidence that engaging IPLCs in management is not only the most equitable, but most effective way forward in conservation."

Follow-up research into what facets of equitable governance produce positive results in various contexts would be valuable, he said.

According to Bergseth, efforts to decolonise conservation in favour of community user rights embody "a really good trend in science," given that, historically, international agreements on protected areas often resulted in the creation of vast futile "paper parks" lacking local input.

Communities that are given a seat at the table are more amenable to the rules — even if they disagree, he said. Usually, "the carrot works better than the stick." ⬛

> **Making sure to include the people that rely on those resources in the design and implementation of management strategies, and making sure the rules around management are fair to them" is crucial everywhere**

The Kutch Desert Wildlife Sanctuary, the only breeding site for flamingos in Asia, has been dubbed "Flamingo City."
Image: Hari K Patibanda, CC BY-SA 3.0, via Flickr.

Bird paradise Kutch turned avian graveyard by power lines

Thousands of birds are estimated to be dying annually in Gujarat's Kutch district due to collisions with power lines, according to **Ronak Gajjar**, Mongabay.com

About 30,000 birds are estimated to be dying annually, due to collisions with power lines, in the Abdasa region of Gujarat's Kutch district, according to data from ongoing work by The Corbett Foundation, a wildlife conservation nonprofit.

These power lines also threaten the critically endangered Great Indian Bustard (GIB). The problem is expected to turn grave as Gujarat is pursuing more energy projects, which may not adequately protect the birds.

At present, Gujarat's total installed capacity of power stations is about 44.12 gigawatts (GW), which includes about 17.1 GW of renewable power projects. However, Gujarat has a major thrust on renewable power and the installed capacity of renewable power projects is estimated to cross 60 GW by 2030. The majority of these renewable power projects in the western Indian state are expected to come up in Kutch.

In December 2021, Prime Minister Narendra Modi, also the former chief minister of Gujarat, laid the foundation stone for a 30 GW capacity hybrid renewable energy park spread over 72,000 hectares of land in Kutch. The park, once completed, is expected to be the world's biggest renewable energy park. It is, however, near the 'Flamingo City' of the Kutch Desert Wildlife Sanctuary – the only breeding site for flamingos in Asia.

Environment and wildlife experts note that in the absence of proper safeguards, the region, which is a critical habitat for birds, would suffer enormous damage due to power lines needed for the evacuation of power generated as well as from increased human interference.

Birds deaths by power lines also common in Rajasthan

In India, Gujarat's installed capacity

> **"**
> ## Our constitution is unique and exemplary where it is highlighted that the preservation of the natural heritage of this country is not only the duty of citizens but also their right.
>
> **M.K. RANJITSINH**
> Former Chairman,
> Wildlife Trust of India

for renewable energy projects is second only to Rajasthan, which also has seen cases of birds dying due to collisions with power lines. According to a Wildlife Institute of India study, an estimated 100,000 birds die annually in Rajasthan's Thar region due to collisions with birds.

The death of birds due to power lines is also being considered in an ongoing case in the Supreme Court of India. In April 2021, the Supreme Court issued an order to underground the power lines for the protection of the GIB in the priority and potential habitat of Gujarat (including Kutch) and Rajasthan and directed for installation of bird diverters on all power lines.

Navinbhai Bapat, a birdwatcher and activist in Kutch, told Mongabay-India that they had to approach the Supreme Court only because the Gujarat government "had not taken any actions for the long-term conservation of birds."

"Several requests were made at the local and state level in the last two decades, but no action was taken for the GIB. We are not at all against development or power production. The villagers and

farmers must get electricity. What we are requesting is just a change in the mode of transmission. Undergrounding will be beneficial to the last surviving GIBs and other threatened bird species of this landscape." Bapat. said.

During 2012-13, to protect flamingos in the Khadir region of Kutch, the Gujarat Energy Transmission Corporation Limited (GETCO) laid 66-kilovolt (kV) power lines underground for 10 kilometres. Now, according to Devesh Gadhavi, Deputy Director, The Corbett Foundation, the same company is taking another 66-kV power line underground near Kunathiya village to protect the GIB, following the order of the SC.

On this, Gadhavi questions that if the government can underground the power lines why can't private companies follow suit. During an ongoing case in the Supreme Court regarding taking power lines underground in Gujarat and Rajasthan, the private companies have voiced their opposition to the idea stating that it will make their projects financially unviable.

"We do everything to save the cultural heritage and monuments of our country. We restrict any development around such monuments if they are going to affect our heritage adversely. In the same way, wilderness areas and forests are also our natural heritage, and they should be preserved with equal commitments."

"Why can't we leave a small area of our natural heritage devoid of such linear infrastructures? Are we ready to compromise everything in the name of development?" questioned wildlife expert and former chairman of the Wildlife Trust of India, M.K. Ranjitsinh, who is also one of the petitioners in the SC case.

"Our constitution is unique and exemplary where it is highlighted that the preservation of the natural heritage of this country is not only

the duty of citizens but also their right. In the matter of protection of the GIB, there is no question of stopping the electricity supply of power production."

"The only matter is to change the mode of transmission into underground power lines. If not done, then we will be facilitating the extinction of the GIB. Thus, it may become the first species of India that was deliberately made extinct despite knowing the scientific steps to save it," he told Mongabay-India.

Can translocating the GIBs solve the problem?

In the present case in the SC, the Gujarat government's energy department is advocating the translocation of four female GIBs out of the Kutch region.

> **Grass species such as Dichanthium, Sporobolus, Cenchrus, Chloris, Echinochloa, etc., which are supporting many herbivores' requirements may get impacted too due to impact on water flow**

Yuvraj Sinh Zala, the Deputy Conservator of Forests (Kutch-West) in Gujarat's forest department, told Mongabay-India that meetings have been held with the concerned power department companies on the death of birds and action is being taken to protect them.

"In the present situation, it is important and a priority to protect the surviving female GIBs and preserve their habitat. Gujarat forest department is taking necessary steps to prevent harmful activities in the protected area and sensitising the staff about the conservation of birds," he told Mongabay-India.

Shyamal Tikadar, Principal Chief Conservator of Forests and the Chief Wildlife Warden of Gujarat told Mongabay-India that "moving the Great Indian Bustard is a long way off." "Even if we go to catch it, it will die. However, bringing a male GIB from Rajasthan is the only suitable option for Gujarat to protect species in the state," he said.

Meanwhile, Devesh Gadhavi, who is a member of the IUCN SSC (International Union for Conservation of Nature-Species Survival Commission) Bustard Specialist Group working for the GIB conservation for more than 12 years, said that in 2020, Gujarat hosted the 13th meeting of the Conference of the Parties to the Convention on the Conservation of Migratory Species, an internationally significant convention for the migratory species where the Great Indian Bustard was the mascot.

"Kutch, especially Abdasa, is not crucial for the GIBs but is also home to more than 25 threatened species of birds which are important from the CMS perspective as well. Therefore, it is crucial to make this habitat safer; not only for GIBs but also for numerous other migratory species for which Gujarat and India both have given international commitments. GETCO has started laying underground power lines as per the SC order. The other power agencies must also follow this to reduce power line-induced bird mortality," Gadhavi told Mongabay-India.

Why is it crucial to ensure environmental safeguards?

According to an affidavit filed in the Supreme Court by the Gujarat government's energy and petrochemical department in April 2022, GETCO has initiated the tender process for the purchase of 18,000 bird diverters, installation of which is expected to end by June 2022. The estimated cost of these bird diverters is about Rs. 29.25 crores (Rs. 292.5 million).

Pankaj Joshi, a biodiversity researcher, said "any rapid development either in block or linear will be a major threat to the movement of many wildlife species and may change the macro and microhabitats for several threatened species such as wild ass, chinkara, desert cat, jungle cat, desert fox, Indian foxes, hyenas, wolves, caracal, honey buzzard, porcupines, etc."

"The approach road network in and around important fringe areas of Great Rann of Kutch and the Little Rann of Kutch will be very harmful to the movement of small and larger mammals; including many migratory seasonal bird species such as flamingos … and there could be an increase in incidents of road kills," Joshi told Mongabay-India.

In addition, he said, due to probable changes in the surface water flow, many grasslands in the region may get impacted too. "Grass species such as Dichanthium, Sporobolus, Cenchrus, Chloris, Echinochloa, etc., which are supporting many herbivores' requirements may get impacted too due to impact on water flow," Joshi noted. ◧

This story was published with permission from Mongabay.com.
(Source: https://www.eco-business.com/ news/bird-paradise-kutch-turned-avian-graveyard-by-power-lines/)

Two Indian boys in the Thar desert in Rajasthan, India, near the city of Jaisalmer.
Image: Emre Azizlerli, CC BY-SA 3.0, via Flickr.

UNACCOUNTED DEATHS PLAGUE SAND MINING OPERATIONS IN INDIA

According to a study, 418 people lost their lives and 438 people were injured in India from December 2020 to March 2022, in cases related to sand mining, writes **Varsha Singh**, Mongabay.com

Illegal and unscientific sand mining from rivers is generally seen as a threat to the environment, especially aquatic life. But there is another dark side to this that is neither recorded in government files nor discussed enough: the hundreds of unaccounted deaths every year due to sand mining, leaving behind broken families.

Haryana resident Dharampal is one such person who lives with these consequences of such sand mining. In July 2019, his 18-year-old son Santi and 15-year-old nephew Sunil died due to drowning in the Som river.

The cousins had gone to bathe in the river, narrates Tejpal, the brother of Dharampal, a resident of Kanalsi village of Yamunanagar district. Due to illegal sand mining in the river, many deep pits were formed in it. When the boys went for a swim, no one was aware that mining was taking place in the river or that it had caused such a situation.

Talking to Mongabay Hindi, Dharampal said, "For two months, we kept pursuing the police administration and even approached the district magistrate. Our complaint was not heard. No compensation was given for the death of our children. We are labourers. How many days could we devote to this, leaving our work? From that day onwards, we have not allowed our children to go towards the river." With no action from the administration, Dharampal prepares to file a case in court.

Kanalsi, the village where the tragedy struck, is where rivers Yamuna, Som and Thapana meet. Kiranpal Rana, another resident of this village, is associated with the Yamuna Sanitation Committee. He says that ever since mining started in his area in 2014, five children from their village have drowned in the river. He claims that mining is not even allowed in the Som river and is being carried out illegally.

> **"**
> **Deaths caused by mining pools in the river are a result of rampant illegal mining. Also, it changes the entire ecosystem of the river.**
>
> **RAJIV SINHA**
> Professor, Indian Institute of Technology Kanpur

Kiranpal says, "The administration is not ready to accept that children have died due to drowning in the pits dug for mining. Those children did not know that the machines had dug pits up to 30 feet deep in the river (about 10 times deeper than the prescribed depth). There was no signboard to warn them either.

The mining department, Yamunanagar administration and Haryana government did not help them. Even the post-mortem of their bodies was not done." He says that the same river where the children would go to swim and play in a carefree manner has now left them in fear.

In Haryana, the limit of sand mining in the river is fixed up to three metres (9.8 feet) deep.

Sunil Tandon, a lawyer in the Punjab and Haryana High Court, says, "At present, I have three cases in Kanalsi village and two adjoining villages in which six juveniles have died. The biggest reason for these deaths is (illegal sand) mining. There is also negligence of the irrigation department. The banks of the river are also unsafe. The river is 10 feet deep in some places and in others it is as deep as 30 feet. If mining is going on, there should be a security guard or notice board to indicate the same so that people living on the banks of the river can be alerted."

Sand has a high demand globally, with about 5,000 crore (50 billion) metric tonnes of sand and gravel being used annually. Along with China, in India too, sand is mined faster than the rate of its formation. Due to high demand, India has to import sand from countries such as Cambodia and Malaysia. The high demand for sand is also the reason why its mining, especially illegal mining, is flourishing.

Even though the Indian government had issued guidelines for sustainable mining in the year 2016, they have not been strictly followed in many places.

Sand mining-related deaths

The South Asia Network on Dams, Rivers and People (SANDRP), a non-profit organisation, studied accident cases and violence, caused due to sand mining, based on English media reporting in India, over a span of 16 months from December 2020 to March 2022.

According to the study, at least 418 people have lost their lives and 438 injured across the country due to sand mining-related reasons during this period. Of the deaths, 49 have occurred due to drowning in pools dug in the rivers for mining purposes. The study also reveals that in mine collapses and other accidents during sand mining, a total of 95 people died, while 21 others were injured in this period. Another 294 people lost their lives and 221 were injured in road accidents related to mining.

The document also finds that 12 people were killed and 53 were injured in the mining-related violence. The number of people injured in attacks on activists/journalists who raised their voices against illegal mining stands at 10. Whereas in the mining mafia attack on government officials, two people have been killed and 126 officers were injured. In mutual disputes or gang wars related to mining, there have

been seven deaths and an equal number of injuries.

These deaths, recorded in the study between December 2020 and March 2022, have been the highest in northern Indian states and union territories, including Uttar Pradesh, Haryana, Uttarakhand, Punjab, Delhi, Jammu and Kashmir and Chandigarh, with a total of 136 people dead. Of these, 24 have died due to drowning in pits dug for mining.

Bhim Singh Rawat, the associate coordinator of SANDRP, who has conducted the study, says, "The

due to the influence of nature. The category of drowning due to mining, flood or any other reason has not been prescribed."

Sub-inspector Manmohan Singh, who prepares road accident data for the NCRB, points out that there are 35 categories of road accident deaths such as overloading and speeding. "There is no category under which we can record that the accident was caused by a vehicle connected with mining."

Mongabay-India tried to reach out to NCRB officials in this regard

Veditum, a research and media organisation that has work focused on rivers, says, "It is most important to bring transparency in matters related to mining. Information like where permission has been given for sand mining across the country should be made public. One also needs to be informed about what action is being taken at the central or state level on illegal or irregular mining. The problem is that in matters related to mining there does not seem to be any strong will on the part of the government."

According to the Uttarakhand river training policy, every year after the rains, a report is put together to access how much sand-gravel stone and debris have accumulated in the river. Based on this, a decision is taken as to how much mineral can be extracted from the river during the mining period from October to May-June. The Forest Department prepares this mining report every year.

Professor Rajiv Sinha at the Department of Earth Science, IIT Kanpur, says that sand mining takes place in rivers at a depth deeper than the prescribed limit.

Zone wise summary table of death, injuries due to sand mining violence & accidents from Dec. 2020 to March 2022

Zone	Death by drowning in sand pits	Deaths/Injuries in Mine collapse & accidents	Deaths/Injuries in Road accidents	Deaths/Injuries of Citizens/Villagers/Farmers in attacks	Deaths/Injuries of Reporters/Activists in attacks	Deaths/Injuries of Govt. officials in attacks	Death/Injuries in Gang-war/Encounter/Infighting	Total Deaths/Injuries
North	24	19/19	110/130	00/10	00/02	00/21	NA	153/182
East	10	35/01	85/61	05/32	00/05	00/58	04/01	139/158
North East	NA	NA	09/00	NA	NA	NA	NA	09/00
West	17	16/00	42/21	02/01	00/01	00/41	02/03	79/67
South	08	25/01	48/09	05/10	00/02	02/06	01/03	89/31
Total	59	95/21	294/221	12/53	00/10	02/126	07/07	469/438

*NA: Not Available.

National Crime Records Bureau (NCRB) registers a death in a road accident due to mining, as a normal road accident." But it is the mining-related speeding vehicles, bypassing police check-posts and trucks laden with gravel wrongly parked on the side of the road that are causing accidents, he said. "The NCRB also needs to look into the deaths caused by drowning in the river due to excessive mining," he added.

The NCRB report on Accidental Deaths and Suicides in India (ADSI) has categories such as road accidents, speeding, overloading and drowning. But such accidents due to mining are not kept in a separate category.

Sub-Inspector Preeti Sharma, who is preparing data on accidents in the State Crime Records Bureau (SCRB), Uttarakhand, says, "We mention in the data that drowning occurred

through email, but no reply was received at the time of publishing.

Talking to Mongabay Hindi, SANDRP coordinator Himanshu Thakkar suggests setting up of monitoring committees for mining and bringing together the local community.

"How will the government officials know that (illegal) mining is going on? People's participation is essential in this. People living along the river know whether mining is legal or illegal. Day or night, machine or people, river or river bank, the level to which mining is taking place. The local people are an important link. Only when they will be involved in surveillance can it be regulated properly."

Accountability must be fixed

Siddharth Aggarwal, an environmental activist associated with

"We are doing a survey inside the Gaula river in Haldwani (Uttarakhand). We are working on developing a better scientific method for estimating the quantum of mining. But this is also a matter of law and order. Deaths caused by mining pools in the river are a result of this practice (rampant illegal mining). Also, it changes the entire ecosystem of the river." The survey work is still underway.

The government has issued guidelines related to monitoring and continuous surveillance of sand mining. **C**

The root causes of overfishing extend well beyond the amount of boats in the water.
Image: Serg Zhukov / Unsplash

Overfishing fix needs more than money

It is a complex problem that requires creative solutions and lots of collaboration, states **Brock Bergseth**

It is easy to stop overfishing, you might think. Just stop fishers from taking too many fish. But of course the problem starts well before any boat hits the water. Turning the tide against overfishing requires addressing the root causes and drivers of the problem such as unreliable or scarce data, too

many boats in a fishery, inadequate monitoring of illegal activity, power asymmetries, and overall consumer demand. All these need to be tackled for real change to take place.

The drivers of overfishing

Catch data can be a red herring. Fishers usually target areas where

fish are most concentrated: along migratory pathways or in habitats where fish aggregate to socialise, feed or reproduce. This maximises the catch while minimising the time, fuel and effort fishers spend. But it becomes problematic when fishers, fishery managers and policymakers do not know enough about the system and the target fish populations and set unsustainable catch levels.

For example, offshore fishers maintained high catch rates of Newfoundland cod because they were fishing the spawning aggregations. In their eyes, there was no problem. Catch rates stayed steady, and even rose — right up until the fish population completely collapsed.

The cod were nearly fished to extinction and 30 years later the stock has still not recovered. While many factors contributed, one of the biggest problems was fisheries managers relying mostly on catch data from the fishery (number of fish caught per unit effort of fishing) rather than robust, fisheries-independent data to estimate the size of the population. This caused a miscalculation. Once the error was discovered, policymakers failed to act decisively until it was too late.

The same scenario then played out again and again across the world's oceans — for the orange roughy, the Mediterranean swordfish and the Pacific bluefin tuna.

Overcapacity also drives overfishing. There are too many fishers in too many boats taking more than fish populations are able to replenish.

When a new fishery is exploited, catches are really good at first, enabling fishers to borrow money to buy more boats and get better technology. Before long though, there are not enough fish to go around. It is easy to take out a loan to buy a boat while a fishery is growing, but it is nearly impossible to sell a boat when a fishery is in decline.

Economists refer to this as "sticky capital" — once fishers have bought in, it is hard to get out. The infamous Chinese distant-water fishing fleet is a case in point: nearly 17,000 boats travel throughout the world's oceans to fish anything they can, anywhere — including near and inside highly protected marine protected areas, such as the ecologically precious Galápagos Islands.

Overcapacity becomes even more problematic if countries cannot or will not enforce monitoring, control and surveillance regimes on vessels fishing in their exclusive economic zones, or on vessels registered under their flag in other waters for which they are legally responsible. When overcapacity meets lack of monitoring, illegal fishing will follow.

Vietnamese boats across the Pacific engage in 'roving banditry': boats fish in one place until the population is wiped out, then move on to fish illegally elsewhere. This scenario plays out across many oceans where industrial-scale distant water fishing fleets from countries such as China, Spain and Taiwan repeatedly exploit the inadequacies of developing economies' monitoring capabilities. The consequences are devastating. Fisheries are destroyed, and local fishers who rely on fishing for survival are unable to feed their families.

Demand is another driver of overfishing — and it goes beyond a taste for sushi-grade tuna. Farmed fish was touted as a more environmentally responsible choice, leading to increasing consumer demand for it. The reasoning was if farmed fish production increased, wild fish populations would have a chance to recover.

But farmed fish are usually fed fishmeal: ground-up small species of wild fish such as anchovies and sardines. Demand for fishmeal is disproportionately felt in developing countries such as Gambia, where Chinese fishmeal factories

and associated fishers deplete local fish resources and discharge waste directly into the waters local communities rely on for survival.

This in turn relates to a further driver of overfishing: power imbalances. Locals allege Chinese investment in Gambian development has effectively bought Gambian politicians — to the point that highly destructive and contentious fishmeal plants continue to operate with relative impunity and little to no legal oversight. Developing economies have little ability to bargain for better deals with mighty countries such as China. Less powerful countries tend to settle for whatever concessions and development 'aid' they are offered.

Fixing the problem at the source

The fix starts by applying basic scientific methods to assess how many fish are still out there and what condition their populations are in. A 2012 estimate suggests nearly 80 percent of the world's fish stocks still lack this fundamental data, so much remains to be done.

Non-governmental organisations can help improve transparency and accountability. Global Fishing Watch, C4ADS and Trygg Matt Tracking are shining a light on commercial fishing's murky practices.

Importantly, these groups are also working to address and fill the gaps in many countries' monitoring capabilities. In revealing the extent of the problem, their work is helping pressure decision-makers to address the issues through policy and litigation.

Addressing power asymmetries between wealthy and developing economies is not easy, but inter-regional and multi-country cooperative agreements have had considerable success. They allow neighbouring countries to share resources and more effectively manage the sale of fishing licenses, and patrolling and enforcement

in their exclusive economic zones. Fish-i Africa and the West Africa Task Force have detected, gathered evidence, and mounted enforcement and prosecution actions against illegal fishing operations in their regions. These cooperatives have improved deterrence and made it harder for bandits and other illegal fishers to flee national jurisdictions to avoid penalties and prosecution.

Hailed by veteran Pacific correspondent Sean Dorney as the "most remarkable achievement of the Pacific Island countries in the last 50 years", the Parties to the Nauru Agreement is a cooperative approach to regional fisheries management. As early as the 1980s, the tuna populations of the eight relatively tiny Pacific Island countries party to the agreement were being massively overfished by distant-water fleets from Asia and Europe.

Individually, these countries had limited bargaining power, so they were undercutting each other when selling fishing rights to fleets from developed countries. The new agreement has coordinated the countries' relations with foreign fleets and in 2011 it led to a trading scheme that dramatically increased the countries' earnings from foreign fleets. A decade ago the agreement's member countries were collecting 2 to 3 percent of skipjack landing values. Today, they're getting 25 percent of the dockside selling price.

These increases improve the lives of the countries' citizens. Kiribati has used its profits on social spending and infrastructure development, and Papua New Guinea has earmarked its profits for the development of cooperative fish farming and sustainable coastal fisheries development.

Fishing has cultural, environmental and economic dimensions, and overfishing is a similarly complex problem with intertangled drivers. Stopping overfishing requires creative and cooperative solutions. These solutions are most effective when experts from multiple sectors (governmental, non-governmental, and scientific) partner with and empower those who suffer most from overfishing – fishers themselves. C

Bangladesh is one of the most vulnerable countries to climate change, according to a 2018 World Bank report.
Bryon Lippincott CC BY-SA 3.0, via Flickr.

First Bangladesh city
Climate plan
Targets
Industrial-hub
Pollution

Narayanganj city, south of Dhaka, which manufactures cement, lime, steel, bricks and knitwear, is aiming to clean up its air and water in a bid to go green and protect residents.

As pale fumes billowed from a factory in the Bandar neighbourhood of Narayanganj, clouding the afternoon sky, tea-stall owner Riad, 21, explained how dust and other pollution from local industries is harming crops and residents' wellbeing.

"People here suffer from respiratory and health problems," he said. "At night, noise and shaking caused by the local power plant disturb people's sleep."

Narayanganj city - a major industrial hub just to the south of Dhaka that produces most of the country's knitwear exports - has the third-worst air quality in Bangladesh, according to a survey last year by Stamford University.

Manufacturing and construction, meanwhile, account for 58 per cent of the city's planet-warming emissions, showed an assessment by the South Asia branch of ICLEI – Local Governments for Sustainability, an international body that helps cities with green policies.

Major sources of pollution include the city's seven cement factories, 70 to 80 illegal brick kilns and a number of steel mills, said Moinul Islam, town planner for Narayanganj City Corporation.

Narayanganj Mayor Salina Hayat Ivy, the first woman to head a city corporation in Bangladesh, told the Thomson Reuters Foundation she had asked cement and lime factories to relocate away from residential neighbourhoods.

In April, the city corporation approved an action plan for low-carbon, climate-resilient development, supported by ICLEI, making Narayanganj the first Bangladeshi city to adopt such a plan, said Jubaer Rashid, Bangladesh representative for ICLEI South Asia.

"We assessed the vulnerability of the climate-impacted urban systems like energy, water supply, waste management and so on, and came up with realistic recommendations for the city to implement," he said.

The city administration has already set up air-quality monitoring systems with help from ICLEI to detect and measure polluting gases like carbon monoxide, nitrogen dioxide and sulphur dioxide, as well as particulate matter, with real-time data displayed on public screens.

ICLEI has also encouraged renewable energy adoption in the city and has set up rooftop solar power systems at some public facilities including a public library and a hospital. But cities have limited authority over policies and actions to tackle climate change in Bangladesh, where central government agencies are charged with delivering public services nationwide.

Municipalities need backing from central government to roll out their plans, said Rafiur Rabbi, leader of the Citizens' Committee, a local movement working on social and environmental issues.

The Department of Environment, for instance, enforces regulations on emissions and effluent management, while district deputy commissioners allocate land to factories.

Water works

Narayanganj industrialised rapidly in the last 100 years owing to its strategic location on the 113 km-long Shitalakhya River, which meets the Dhaleshwari River near the city, according to local journalist Golam Rabbani. Jute, hosiery and garment industries developed in the city as the goods could be transported along the Shitalakhya.

In addition, Narayanganj has more than two dozen canals for water transport and stormwater drainage to prevent flooding. But in recent decades, there has been sustained encroachment on the river and canals, hampering run-off of stormwater and causing water-logging in some areas, said activist Rabbi. The city corporation has been working to restore 26 canals in phases, which is expected to stop bad odours, boost vegetation and enable inhabitants to get around more easily.

> "
> **The example of Narayanganj will demonstrate how local governments could play a role in realising the goals of the Paris Agreement on climate change.**
>
> **JUBAER RASHID**
> Bangladesh Representative, International Council for Local Environmental Initiatives South Asia

"Water bodies also reduce the heat island effects in urban areas through evaporation," said environmental engineer Dipak Bhowmick, ICLEI's project officer in Narayanganj. The Shitalakhya, however, has been damaged by dumping of untreated industrial effluents and municipal waste in its water, decimating biodiversity and making it "biologically almost dead", said journalist Rabbani. This has hurt local people too. Manoranjan Goswami, 73, a leader of the fisher community in eastern Narayanganj, lamented the loss of fish and erosion of traditional livelihoods.

"There are around 100 fisherman families here, but the fish stock in the river is mostly gone," he said.

Smaller businesses usually lack funding to install and operate effluent treatment plants, said activist Rabbi, urging the government to set up central treatment plants to serve industry clusters.

The city corporation is working to build eco-parks - ecological zones including forests, wetlands and recreational green spaces - along the banks of the main river and canals to protect water bodies and address climate change, said Mayor Ivy.

Reducing river and canal pollution could also help ease growing pressure on underground aquifers as residents sink tube wells to extract clean water for their own use, she added.

Migrants overlooked

Mohammad Babul Hossain, 60, moved to the city from Chandpur several years ago, and has worked as a taxi and rickshaw driver in Narayanganj - a place he prefers as "there is too much hurly-burly and trouble over there in Dhaka".

At least three-quarters of Narayanganj's roughly 2.5 million-strong population are migrants from across Bangladesh. As one of the most vulnerable countries to climate change, Bangladesh could see its internal climate migrants top 13 million by 2050, according to a 2018 World Bank report.

Boatmen like Mansur Gazi, 48, and Mahadeb, 45, who also left their flood-prone riverine district of Chandpur for Narayanganj, ferry people across the Shitalakhya for a few cents a journey.

Most of the manual and electric rickshaws that serve as popular transport in the city are also driven by migrants.

But their presence can cause social tensions, as "newcomers often settle down as roadside hawkers, causing congestion", noted Rabbi.

Despite growing migration, Narayanganj - like the vast majority of cities - lacks a formal strategy to deal with the challenges, while migration as a way of adapting to climate change pressures is not included in its ICLEI-backed climate action plan.

Funding shortfall

Insufficient finance is the key constraint to Narayanganj's efforts to pursue a climate-smart development model, said Mayor Ivy.

The city corporation's annual budget for 2021-22 is about $80 million, while in Rajshahi - which has less than half the population but is the main city of its administrative division northwest of Dhaka - it is more than $120 million. "We need a larger budget," said Ivy, noting Narayanganj's outsized contribution to the national economy.

ICLEI is working closely with the city corporation to formulate project proposals that include climate concerns and pitch them to global development organisations for funding, said ICLEI South Asia project officer Bhowmick.

The World Bank, Japanese government and Asian Development Bank are among those that have funded projects in the city.

Town planner Islam urged other government organisations working there, such as the Department of Environment and the Bangladesh Inland Water Transport Authority, to coordinate their activities with the city's sustainable development aims.

ICLEI country head Rashid said Narayanganj would serve as a pilot for low-emissions urban development in Bangladesh. Rajshahi is the second city to approve and start implementing a climate action plan, but there are no others as yet, he noted. The southwestern port city of Mongla, meanwhile, has made some progress, with Bangladeshi organisations helping it craft a strategy for infrastructure to prevent flooding, as well as opportunities for climate migrants.

"The example of Narayanganj will demonstrate how local governments could play a role in realising the goals of the Paris Agreement on climate change," Rashid said.

This story was published with permission from Thomson Reuters Foundation, the charitable arm of Thomson Reuters, that covers humanitarian news, climate change, resilience, women's rights, trafficking and property rights. Visit http://news.trust.org/climate.

(Source: https://www.eco-business.com/news/first-bangladesh-city-climate-plan-targets-industrial-hub-pollution/)

> **Reducing river and canal pollution could also help ease growing pressure on underground aquifers as residents sink tube wells to extract clean water for their own use.**

Make the Right Move

ABC

Ready to Lease Office Spaces

ABC
Assotech Business Cresterra
Sector - 135, Expressway, Noida

1 Integrated Intelligent IT Park Complex

2 1.8 Million SQFT Mixed Use Development

3 LEED Gold Certified Green Building Complex

4 Market Leading Floor Efficiency of 83% [+-2%]

5 70% leased out of Phase - I

SERVICED APPARTMENTS
Phase - I

OFFICE SPACES

RETAIL
Phase - I

ASSOTECH
www.assotech.in
Assotech Realty Pvt. Ltd.
46, First Floor, Janpath, New Delhi - 110001
Ph: +91 - 8010821111
info@assotech.in

Our Leasing Partners
CBRE

SAVE LIVES GIVE SMILES

Every Year, **35,000+** children are born with cleft lip and palate in India. Untreated clefts lead to difficulties in eating, breathing, hearing and speaking. The children often face social stigma and drop out of school.

Cleft treatment can change this. Forever.

OUR LEGACY & REACH:

640,000+ cleft surgeries since 2000

150+ partner hospitals

30+ states and UTs

300+ cleft medical professionals

Smile Train empowers local medical professionals with training, funding, and resources to provide free cleft surgery and comprehensive cleft care to children across the country. We advance a sustainable and scalable global health model for cleft treatment, drastically improving children's lives, creating both an immediate and long-term impact.

Let your CSR Program transform lives and create lasting impact.

Join us to change India, one smile at a time.

Contact us:

Email ID: csrindia@smiletrain.org

Address: Plot No. 3, LSC, Sector C Pocket 6&7, Vasant Kunj, New Delhi 110070 Ph: 011 47856300
www.smiletrainindia.org

SmileTrain
Changing India One Smile At A Time

National Cleft Helpline – 1800 103 8301