

CSR TODAY

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FAO opens groundbreaking conference aimed at tackling the threat of animal diseases



Rajesh Tiwari
Publisher
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The conference aims to advance global efforts to enhance animal health, prevent disease outbreaks, and promote sustainable livestock production and One Health implementation.

In a pathbreaking initiative, the Food and Agriculture Organization of the United Nations (FAO) has opened its first-ever Global Conference on Animal Health Innovation, Reference Centres and Vaccines, aimed at tackling animal diseases costing the world hundreds of billions of dollars annually and posing a threat to human health, global food security and livelihoods.

"The productivity and resilience of live-stock systems worldwide are threatened by infectious diseases, emerging pathogens, endemic disease burdens, and climate change," FAO Chief Scientist ad interim Beth Crawford said. "Addressing these challenges calls for a united effort, leveraging our collective expertise and resources," she added.

Significant step

The three-day event represents a "unique opportunity to explore how to integrate existing mechanisms and knowledge with new and improved tools to reduce the global burden of animal disease," Crawford said.

Participants include Girma Amente, Minister for Agriculture, Ethiopia, Rwamirama Bright Kanyontore, Minister of State for Agriculture, Animal Industry and Fisheries, Uganda, Alka Upadhyaya, Secretary, Department of Animal Husbandry and Dairying, India, Emmanuelle Soubeyran, Director General, World Organization for Animal Health and animal health experts from around the world.

Animal diseases such as peste des petits ruminants (PPR), highly pathogenic avian influenza (HPAI) and African swine fever (ASF) directly affect the livelihoods of farmers through increased mortality and reduced livestock productivity, resulting in:

- cost to the global economy of up to \$300 billion per year
- some 20 percent of animal production being lost because of disease

- 75 percent of emerging animal diseases can be transmitted to humans.

Vaccinating animals is one of the most cost-effective and sustainable measures to prevent and control infectious emerging and re-emerging diseases. It reduces animal mortality, minimizes economic losses, decreases the need for antibiotics, and helps protect human health, food security, and farmers' livelihoods.

The conference aims to advance global efforts to enhance animal health, prevent disease outbreaks, and promote sustainable livestock production and One Health implementation.

However, achieving this requires overcoming numerous challenges, including infectious diseases, climate change, and productivity and resilience issues.

FAO's role

FAO is instrumental in addressing these challenges. It supports disease prevention and control programs, provides emergency responses, builds capacity, and ensures the supply of high-quality veterinary vaccines, all to enhance food security and livelihoods.

Among the aims of this week's gathering will be to explore how to integrate existing mechanisms and knowledge with new and improved tools to reduce the global burden of animal disease.

It will also highlight the critical role of the 60 FAO Reference Centres worldwide, which are institutions designated to provide specific technical advice and services across 25 thematic areas critical to Member Nations. These centres of excellence provide expertise and training in disease diagnostics, epidemiology, and applied veterinary research, supporting capacity development and playing a crucial role in enhancing the sustainability and resilience of livestock systems. 

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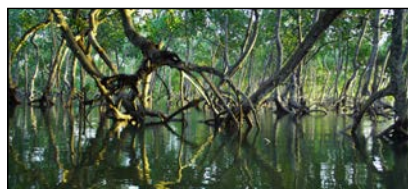
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CSR NEWS



Kotak Education Foundation felicitates 1000 scholarships under Kotak Junior Scholarship Programme for 10th+ Students in Mumbai at RIZE 2024

Kotak Education Foundation (KEF) - the CSR implementing agency of Kotak Mahindra Group, celebrated the annual scholarship felicitation ceremony, RIZE 2024, with great pride and joy, recognizing the achievements of 1000 new scholars and support their further education (10th +) from economically disadvantaged section across the Mumbai Metropolitan Region. The event underscored Kotak Education Foundation's commitment to fostering educational excellence and holistic development for its beneficiaries.

Jayasree Ramesh, Executive Committee Member (EC) & Director of Education Programme and Scholarship, Kotak Education Foundation said, "These 1000 Kotak Junior Scholars exemplify the transformative power of education. "Our scholarship program is a gateway to a world of infinite possibilities.

By providing a platform for holistic development and networking, we're empowering these scholars to become the leaders of tomorrow, reaching the pinnacle of their aspirations".

The event was graced by Ayush Mehra, a versatile actor, model, and content creator. Known for his roles in popular shows like Minus One, Please Find Attached, Operations MBBS, and Netflix's Call My Agent, he inspired the scholars with his presence. He took the time to personally engage with each scholar, offering words of encouragement and motivation throughout the event. The ceremony, witnessed stellar and mesmerizing performances beginning with a traditional Ganesh Vandana by the talented Dr. Swapanokalpa Dasgupta's dance troop. The event featured several heartfelt moments, including a soul-stirring speech by our alumni, Amol Bandagale

expressing deep gratitude for Kotak Junior Scholarship's focus on the overall development of students.

Sanjay Shripat Rao Kaatkar, Commissioner of Mira Bhayandar Corporation delivered an inspiring talk, encouraging the new batch of Kotak Junior scholars to pursue their goals with determination and resilience. The scholars were awarded their scholarship certificates, marking the beginning of their journey in higher education across various fields. The atmosphere was filled with pride and accomplishment as each scholar received their certificates amidst enthusiastic applause.

Kotak Junior Scholarship's long-standing impact was also highlighted during the ceremony by Shivaji Dam, Managing Trustee, Kotak Education Foundation. He shared insights into the Foundation's ongoing commitment to shaping the future of young minds through the Kotak Junior Scholarship program.

Additionally, Chetan Savla, President of Sustainability and Strategic Projects at Kotak Mahindra Bank, delivered an inspiring speech. His words motivated the Kotak Junior scholars, emphasizing the importance of the scholarship program and its growth in the last couple of years.

The ceremony was graced by prominent members from Kotak Education Foundation's management, including Shivaji Dam, Managing Trustee; Dr. Ganesh Raja, CEO; Parag Ganu, CFO; and Jayasree Ramesh, Director, Education and Scholarship.

The RIZE 2024 ceremony was a testament to Kotak Education Foundation's unwavering commitment to empowering the next generation through education, ensuring they reach their full potential.



The Godavari Initiative Launches Its Nashik Regional Consultation on Collective Action for Godavari River Basin

The consultation is aimed to unite diverse stakeholders to address growing ecological challenges affecting the Godavari River and surrounding areas.

The Godavari Initiative (TGI), in collaboration with Diageo India as the founding corporate partner hosted a Regional Consultation on Collective Action for the Godavari River Basin on in Nashik. The consultation brought together corporates, industrial bodies and associations, government agencies, civil society organisations, and academia to tackle the urgent

ecological challenges faced by the Godavari River and its surrounding regions. The event was held in the presence of Shashikant Patil, Deputy Engineer, Maharashtra Industrial Development Corporation; Sanjay Sonawane, Vice President North Maharashtra, Maharashtra Chambers of Commerce Industry and Agriculture (MACCIA); Dhananjay Bele, President, Nashik Industries and Manufacturers Association; Lalit Boob; President, Ambad Industries and Manufacturers' Association from leading industry bodies. The consultation also witnessed presence from leading corporates that are present in the Nashik region, around the Godavari River basin.

Launched earlier in Mumbai with Mukesh Sinha, Chairman, Godavari River Management Board,

TGI is a collaborative effort aimed at enhancing the resilience of the Godavari Basin in Maharashtra through collective action, knowledge sharing, and sustainable water management practices.

Navdeep Singh Mehram, Head – CSR & Sustainability, Diageo India said, "At Diageo India, water stewardship has been a longstanding priority for us under our 'Spirit of Progress' ESG action plan. Initiatives like this consultation are critical because they bring together government, industries, nonprofits, academia, and communities—to collaborate on practical solutions. We are proud to be a founding corporate partner of this initiative, and believe, collective action is the way forward to restore Godavari's ecological balance and ensure its sustainability for future generations."

As next steps, the TGI team will share an outcome document with all key participants to ensure continued engagement, followed up with direct consultations with relevant stakeholders to discuss action plans. This moment is a crucial step in preserving Nashik's water resources for future generations.

Highlights from the Regional Consultation

The event highlighted the need for tech-forward methods and actions for the sustainable management of the Godavari River Basin in Maharashtra. It opened with representatives from corporates outlining TGI's mission and Nashik's critical role in the future of the Godavari River Basin.

Senior officials from government organisations also shared insights on policies aimed at river conservation. A significant highlight of the regional consultation was the inking of Letters of Understanding (LoUs) with three industry associations working at the state, district, and block levels. The inking of the LoUs signifies our collective resolve to take concrete steps towards a sustainable future for the Godavari River Basin.

There are pressing challenges facing the Godavari River, and right now we the need for collaborative engagement among stakeholders is critical and paramount. Initiatives such as The Godavari Initiative can work with Maharashtra government's, "Gaalmukta Dharan," aiming to the river's natural beauty and I call for collective action to clean the Godavari, ensuring that we can once again experience its pristine beauty," said Sanjay Sonawane, Vice President of North Maharashtra at the Maharashtra Chambers of Commerce, Industry & Agriculture (MACCIA).

"Nashik is my home and our connection with the Godavari River is very emotional. The Godavari River basin in Maharashtra needs urgent

attention and intervention from all stakeholders including government, corporates and communities that are dependent on the Godavari River for its abundant resources. We are happy to work with the team at The Godavari Initiative to nudge collective action for improving the health and resilience of the Godavari River basin in Maharashtra," shared Dhananjay Bele, President, Nashik Industries & Manufacturers Association.

"The Godavari River is not only a lifeline for agriculture and industry but also a crucial part of the cultural and ecological fabric of Nashik and the surrounding region. The challenges facing the river are significant, but through collective action, we can drive impactful solutions. This consultation is an opportunity for stakeholders across sectors to come together, share insights, and develop strategies that will ensure the sustainable management of the

Godavari River Basin for future generations. We are committed to facilitating meaningful collaborations that will restore and protect this vital resource," said Lalit Boob, President, Ambad Industries & Manufacturers Association.

TGI also presented how collective action can be instrumental to drive impactful change, with detailed research outlining key challenges and proposed strategies to address issues impacting the Godavari River Basin regionally. Major civil society organisations who presented their work and initiatives in Nashik region. The consultation concluded with a detailed presentation on how sustainable tourism and culture can be prevented in Nashik through specific initiatives for the Godavari River basin.

Why Now?

Globally, 100 river basins have been identified as critical priorities for water stewardship, representing regions with immense potential for collective action. Eight of these priority basins are in India, with the Godavari River Basin a central focus for TGI. As part of the UN Global Compact's CEO Water Mandate, TGI's collective action platform seeks sustainable solutions for river basin management. The Godavari Basin, spanning key agricultural and industrial zones, has come under increasing pressure from urbanisation, industrial growth, and unsustainable practices, making collective action more urgent than ever.

Call for Collective Action

The Nashik Regional Consultation provided not only a platform for dialogue but also an opportunity to develop a tailored action plan for the Nashik district, addressing local challenges within the broader framework of Godavari River conservation. Attendees explored how their respective organisations could contribute to sustainable solutions.

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450 Students of Samsung Innovation Campus Certified in Future- Tech Skills at Babasaheb Bhimrao Ambedkar University

Samsung India's flagship CSR programme 'Samsung Innovation Campus' concluded the Coding & Programming and Big Data courses for its first batch of 450 students in Lucknow, Uttar Pradesh, reiterating the brand's commitment to being a strong partner of the country and working alongside the Government in its mission to skilling the country's youth and powering #DigitalIndia.

The students were certified at a felicitation ceremony attended by Minister of State for Higher Education, Uttar Pradesh, Rajani Tiwari alongside officials from Samsung and the Electronics Sector Skills Council of India (ESSCI).

At the conclusion of the entire programme this year, the toppers from each domain will be awarded a cash prize of INR 1 lakh and will

have the chance to visit Samsung's facilities in Delhi/NCR. During these visits, they will have the opportunity to engage with and receive mentorship from Samsung's leadership team. Not just that, the national course toppers will receive exciting Samsung products, including Samsung Galaxy Buds and Samsung Galaxy Smartwatches.

"We at Samsung are committed to the mission of educating the youth of the nation in future -tech skills to be job-ready. The second season of Samsung Innovation Campus, our flagship CSR programme, reflects this dedication and provides youngsters with valuable training in cutting-edge technologies such as AI, IoT, Big Data, and Coding. Through this initiative, we want to empower the youth and create opportunities for them in future- tech domains,

further boosting India's growth story and strengthening our commitment to powering Digital India," said Shubham Mukherjee, Head of CSR & Corporate Communication at Samsung Southwest Asia.

"It's the Government of India's vision to have a Skilled India. I am confident that the second season of Samsung Innovation Campus, Samsung's CSR programme will make the youth of the state future-ready. By focusing on advanced technologies, it would also equip them with the tools necessary for professional growth in today's digital world," said Rajni Tiwari, Minister of State, Higher Education, Uttar Pradesh stated.

"With this program, Samsung is reiterating its commitment to being a strong partner of India and working alongside the Government in its

mission to empower the country's youth and strengthen Digital India. This collaboration reinforces the shared vision of equipping India's youth with the skills needed for the jobs of tomorrow. It is heartening to see the programme expand and reach a vast pool of young talent across the country, including those in remote areas," said Dr. Abhilasha Gaur, CEO, Electronics Sector Skills Council of India.

Samsung Innovation Campus offers in-depth training across four key technology areas -- AI, IoT, Big Data, and Coding & Programming. Students gain hands-on experience through capstone projects and soft skills training aimed at boosting their employability. The AI course participants undergo 270 hours of theory training followed by 80 hours of project work, while those enrolled in IoT and Big Data courses receive 160 hours of theory training and complete 80 hours of project work. Participants in the

Coding & Programming course complete 80 hours of training and take part in a hackathon. Samsung will train 3,500 students across India as part of this programme.

The programme covers eight educational institutions across four states. In the northern region, training centres are established in Lucknow and Gorakhpur, besides two in Delhi NCR. In the southern region, which includes Tamil Nadu and Karnataka, training centres are located in Chennai and Sriperumbudur, in addition to two in Bengaluru.

During the programme, participants will continue to receive instructor-led blended classroom and online training through approved training and education partners of ESSCI across the country.

Youth enrolled for the programme will undergo classroom and online training and complete their hands-on capstone project work in their selected technology areas

in AI, IoT, Big Data and Coding & Programming. They will also be imparted soft skills training to enhance their employability. The participants are being mobilized through ESSCI's training and education partners across India. The approach includes a combination of offline and online learning, immersive hackathons and capstone projects, as well as expert mentorship provided by Samsung employees.

During 2023, Samsung Innovation Campus successfully trained 3000 students in future-tech courses. Samsung's involvement in this initiative underscores its commitment to nation building through Corporate Social Responsibility (CSR) activities in India. It complements Samsung's other CSR endeavours, including Samsung Solve for Tomorrow. Through these initiatives, Samsung aims to empower future leaders of India by providing them with the necessary education and skills to drive meaningful change.

SBI Foundation Announces Asha Scholarship Program 2024

A scholarship program to support 10,000 of India's brightest students

SBI Foundation, the CSR arm of the nation's largest bank, State Bank of India, has announced the 3rd edition of its flagship Asha Scholarship Program guaranteeing support to 10,000 meritorious students from underprivileged backgrounds nationwide.

Students from Class 6 to post-graduate level can now access scholarships ranging from Rs 15,000 to INR 20,00,000 in a year. The

program offers specialized categories for school students, undergraduates, postgraduates, as well as those enrolled in IITs and IIMs in India. Specifically, the 'Study Abroad' category designed for SC and ST students will act as a major aid to them in pursuing Masters and above from eminent institutions worldwide.

The Asha Scholarship program is dedicated to identifying and supporting meritorious students from the most underserved backgrounds, with a mission to make quality higher education accessible for young Indians. Since its inception in 2022, the scholarship program has provided timely financial support to the tune of ₹3.91 crore to 3,198 students.

Speaking about the initiative, Challa Sreenivasulu Setty, Chairman, State Bank of India highlighted its vision, "Asha Scholarship embodies SBI's core value of service beyond banking, and being an active contributor to our nation's steady march towards progress and prosperity for all. We are proud to be expanding this transformative initiative to 10,000 students this year. Asha Scholars will play an important role in achieving our Nation's vision of a Viksit Bharat by 2047."

Coinciding with Independent India's 77 years of continued progress, the program aims to nurture and mentor young Indians as leaders and change-makers for the future.

ASDC at ACC Thondebhavi empowers rural women by transforming their careers with skill development

ACC, the cement and building material company of the diversified Adani Portfolio, continues to empower rural communities in Karnataka through upskilling. The Adani Foundation's Adani Skill Development Centre (ASDC) at ACC Thondebhavi has been instrumental in equipping young people with the skills they need to thrive. Recently four inspiring success stories have emerged from this ASDC, demonstrating the transformative impact of its training programmes.

Channamma KS, a 36-year-old woman with a physical disability and speech disorder, faced several challenges in finding employment after completing her Bachelor of Arts degree. Relying on her farmer father, and her daily-wage labourer brother for support, Ms. Channamma's life changed when she joined Saksham, ACC's CSR upskilling initiative, and enrolled at ASDC Thondebhavi. After completing a three-month training there, she landed a job as a back-end executive at Google in Marathahalli, earning a monthly income of ₹15,000 with free food and accommodation. "I never imagined I would have this opportunity," she said, adding, "ASDC gave me the skills and confidence I needed to succeed. I am so grateful as I can now support myself and my family."

Gowthami GN had to discontinue her education after class 12 due to financial constraints. Her family, who relied on agricultural labour, often struggled to make ends meet. However, the future seems bright now as Gowthami joined ASDC Thondebhavi and enrolled in the



Adani Foundation's Adani Skill Development Centre (ASDC) at ACC Thondebhavi plays a pivotal role in equipping young people with the essential skills needed to succeed.

Channamma KS, Gowthami GN, and sisters Vanaja GR and Nirmala GR are among the recent success stories of ASDC skill development programmes.

ASDC students are placed in noted corporate houses and multinational companies (MNCs), including Google, among others.

Retail Sales Associate course. She secured a retail job with an annual pay package of ₹2.25 lakh upon completing her 2.5-month training. She said, "ASDC gave me the chance to learn new skills and build a better future for myself and my family. My



parents are so proud of me." Sisters Vanaja GR and Nirmala GR were unable to continue their education after completing class 10. Their elderly parents, including their mother who suffers from chronic illnesses, depended on them for support. Recognising the need for skills and employment, they joined ASDC Thondebhavi's Retail Sales Associate course in June 2023. As a result, they secured retail jobs upon the course completion. They now make a combined annual income of ₹4.51 lakh. The sisters excitedly said, "We are so grateful to ASDC for giving us this opportunity. We are now able to take better care of our parents and build a brighter future."

ACC and the Adani Foundation's initiatives via ASDC are highlighted through these success stories. They showcase how skill development can play a crucial role in empowering rural communities and fostering sustainable growth, while contributing to the country's success.

SBI Foundation Launches 'SBI-Sammaan' Program in Gagode to Honor Vinoba Bhave



SBI Foundation launches 'SBI Sammaan' in Gagode Budruk, paying tribute to Vinoba Bhave with key developmental initiatives aimed at uplifting the local community

Sammaan is a unique program series initiated by SBI Foundation to pay homage to some prominent personalities from various parts of the country, by carrying out developmental activities in their native villages. Vinoba Bhave is one amongst the freedom fighters identified for the Sammaan program and various developmental activities are being carried out in Gagode Budruk, his birthplace.

Upgradation of the Government Schools and Anganwadis, installation of drinking water filters, solar street lights, dustbins, and the establishment of a stitching training center are some of the activities which have been initiated so far. Additionally, 'Vinoba Bhavan', a community center has been set up for information dissemination and facilitating online services. SBI Foundation has partnered with ANARDE Foundation, a non-profit organization for implementation of this CSR program.

Sanjay Prakash shared, "Sammaan is a unique initiative aimed at honoring renowned freedom fighters, war veterans, and public heroes by carrying out developmental activities in their native places. Vinoba Bhave ji is a towering figure in India's Independence movement, and we are pleased to pay our humble homage through the Sammaan program in Gagode Budruk."

Naveen Misra, Deputy General Manager of SBI Mumbai East Zone stated, "Vinoba Bhave pioneered the Bhoodan movement for the landless and his 'Sarvodaya' philosophy is lauded across the world. We are proud to contribute towards the development of his village and hope that these initiatives will benefit the local communities."

Nita Mahuvakar, CEO of ANARDE Foundation expressed, "This is a novel program, especially given the dire need for such interventions in the area. We extend our gratitude to the Gagode Panchayat and other stakeholders for their support and active involvement in the efforts being carried out in memory of the great visionary from their village."

Sajjan Jain Trust an initiative by Arkade Developers Prioritizes Sustainability, Collects Over 100kg of Waste for Community Recycling Project

Keeping sustainability at center, Sajjan Jain Trust, an initiative by Arkade Developers, one of Mumbai's leading real estate developers, collected over 100 kg of plastic and e-waste in a month-long cleanliness drive. The brand gathered 92 kg of plastic and 10 kg of e-waste from their various projects and construction sites in a month. The brand recently completed 38 years in the business of real estate and has 29 completed projects across Mumbai. Their residential projects are recognized with platinum certification for eco-friendliness, reflecting their long-standing commitment to environmental responsibility.

The collected materials include a variety of plastics — such as bottles, tetra packs, milk pouches, and single-use plastics—as well as e-waste like wires, cables, headphones, and old mobile phones. This waste, which often ends up in landfills or oceans, poses serious environmental issues. Through a partnership with Project Mumbai, the organization recycles this waste into practical items such as benches, pens, pencil boxes, gardening pots, and tiles. These products will be donated to BMC schools and gardens, benefiting the community and improving local infrastructure.

India is a leading producer of plastic waste, generating 10.2 million tonnes annually—more than double the amount produced by the next largest contributors. Addressing this crisis requires urgent action from both individuals and corporations. Arkade Developers' initiative is a step in the right direction, demonstrating how businesses can make a substantial impact on reducing plastic waste and promoting sustainability.

Sajjan Jain Trust, an initiative by Arkade Developers hopes to inspire other companies and developers, contributing to a cleaner and more sustainable Mumbai.

Honeywell, in Association with ICT Academy Inaugurates Centre of Excellence for Women and Youth Empowerment in Sustainability Studies

Honeywell, as a part of its CSR initiative, has launched the Honeywell Centre of Excellence (CoE) for Sustainability Studies, a significant initiative aimed at empowering women and youth through advanced training in sustainability technologies. The inaugural event was held at Madurai Kamaraj University, with distinguished guests and industry leaders in attendance.

This initiative focuses on establishing Centers for Women Empowerment (CWE) and Centers for Youth Empowerment (CYE) across 10 colleges in Madurai and Delhi. By offering industry-endorsed certifications, the program aims to equip 500 underprivileged students with the necessary skills to thrive in the modern workforce. In addition, 20 faculty members from these institutions will be trained to serve as mentors, ensuring that students receive comprehensive guidance and support throughout their learning journey. The project is committed to ensuring that 60% of the certified students secure employment, with job fairs and placement initiatives facilitating their entry into the workforce.

Dr. Palanivel Thiaga Rajan, Hon'ble Minister for IT and Digital Services, Government of Tamil Nadu, is the Chief Guest for the event and delivered the inaugural address. The inaugural event also featured a range of distinguished speakers. The ceremony began with the Tamil Thai Vaalthu, followed by a welcome address from Dr. M Davamani Christofer, Member



Honeywell, in Association with ICT Academy Inaugurates Centre of Excellence for Women and Youth Empowerment

of the Conveners Committee at Madurai Kamaraj University.

Srikanth V, Chief Executive Officer of ICT Academy, set the context for the event, highlighting the critical role of sustainability education in today's world. He remarked, "This partnership with Honeywell is a testament to our shared vision of empowering the next generation. By providing these young minds with the tools and knowledge to succeed in STEM fields, we are not only enhancing their employability but also contributing to a more sustainable future. This initiative is about more than just education; it is about creating opportunities that will uplift entire communities."

Dr. Niranjan Kalyandurg, President of Honeywell Technology Solutions, delivered a special address, underscoring Honeywell's commitment to sustainability and

the importance of such initiatives in driving positive change. The event also featured a Guest of Honor address by Dr. Gavin Towler, Corporate Chief Scientist and Global Chief Sustainability Officer at Honeywell, who spoke about the global importance of sustainability and the role of education in achieving it.

"Enhancing education and skill development for India's growing youth population has been at the core of Honeywell's commitment, especially now in the 'Sustainability' field. We aim to train students with skills for tomorrow, paving the way for equitable livelihoods for young individuals," said Dr. Niranjan Kalyandurg, President of Honeywell Technology Solutions. "With technological advancements, empowering our youth with the right skill will not only ensure their personal success but also contribute to driving

sustainable socio-economic practices along with growth." The event concluded with the ribbon-cutting ceremony and the official inauguration of the Honeywell Center of

Excellence for Sustainability Studies, followed by a vote of thanks from Suresh Babu L, Head of Corporate Initiatives at ICT Academy. The evening closed with an interaction

session between the speakers and the program beneficiaries, providing a platform for the students to share their aspirations and gain insights from the industry leaders.

Grameen Foundation and Protean eGov Technologies Forge Strategic Partnership to Drive Financial Inclusion

Grameen Foundation for Social Impact (GFSI) and Protean eGov Technologies Limited have signed a strategic Memorandum of Understanding (MoU) to enhance financial inclusion across India, with a focus on covering the underserved communities. The MoU was signed today at the Protean Pavilion, Jio World Convention Centre, during the Global Fintech Fest 2024.

This collaboration aims to leverage technology to transform agent-based networks, enabling Business Correspondents (BCs) to deliver a diversified range of financial and non-financial services. By equipping BCs with contemporary skills and innovations, the partnership seeks to improve access to essential financial services, particularly for women and marginalized groups.

Bharati Joshi, CEO, Grameen Foundation India and Grameen Foundation for Social Impact emphasized the partnership's potential to drive systemic change, stating, "This MoU represents a significant step towards realizing our shared vision of financial enablement for all. By combining our expertise and networks with Protean's technological capabilities,

we are poised to create lasting impact in the communities we serve, especially benefitting women as agents as well as clients."

Bertram D'Souza, Chief Product & Innovation Officer, Protean eGov Technologies added, "Our partnership with Grameen Foundation for Social Impact marks a significant milestone in our journey of unlock-

lives of millions of individuals and small entrepreneurs."

Arindam Dasgupta, Interim CPO and Director of Innovations in Digital Finance, Grameen Foundation for Social Impact, remarked, "This partnership is not just about expanding financial services; it's about reshaping the ecosystem to be more inclusive and responsive to the

needs of those at the bottom of the pyramid. Through this collaboration, we are committed to creating sustainable pathways to financial independence for millions."

Rahul Dube, Project Director of Innovations in Digital Finance, Grameen Foundation for Social Impact stated, "Our focus is on leveraging technology to bridge the gap in financial access and create solutions that are both scalable and impactful. This partnership with Protean is a critical step in achieving

those goals, and we look forward to the transformative outcomes it will bring." The collaboration between Grameen Foundation and Protean eGov Technologies marks a significant milestone in the journey towards financial inclusion, paving the way for innovative solutions that will allow communities and transform lives across India.



Bharati Joshi, CEO, Grameen Foundation India & Grameen Foundation for Social Impact & Bertram D'Souza, Chief Product & Innovation Officer signs partnership MoU

ing economic and social impact with the power of Digital Public Infrastructure across multiple-sectors like Financial Services, Sustainability, Education & Skilling, Ecommerce, Agriculture and Healthcare. Grameen Foundation's focus on creating impact at the last-mile especially in rural India allows us to make a positive impact to the



Air India SATS and Odisha Government Sign MoU to Train Next Generation of Aviation Professionals

Air India SATS Airport Services Private Limited (AISATS), India's leading airport service management company, has entered into a formal agreement with the Government of Odisha for providing skill development training to the state youth in the aviation sector.

The Memorandum of Understanding (MoU) signed with the Directorate of Skill Development and Employment (DSDE), Skill Development and Technical Education Department, aims to enhance aviation training opportunities for aspiring professionals from Odisha.

The collaboration comes at a crucial time, with passenger capacity at major Indian airports projected to more than double from 192 million to 420 million in the next four years. Additionally, the fleet size of Indian carriers is expected to nearly triple



from 700 to 2,000 aircraft, highlighting the urgent need for skilled aviation professionals.

Under this agreement, AISATS will facilitate a rigorous 30-day training

program for candidates from Odisha at its established Training Academy in Hyderabad. The program is designed to equip participants with the necessary skills for roles in ramp

handling and customer service within airport operations. Admission to the program requires meeting specific educational prerequisites to qualify for the AISATS Training Academy and to undertake training for these specialized roles.

Sanjay Gupta, CEO of AISATS, stated, "This partnership with the Government of Odisha marks a significant aspect in our ongoing commitment to fostering indigenous talent and contributing to the advancement of India's aviation sector. By providing access to our state-of-the-art training academy in Hyderabad and offering immediate employment opportunities, we aim to cultivate a highly skilled workforce that will be instrumental in

shaping the future of airport operations across India. With the projected growth in the aviation sector, which has increased the demand for ground handlers to ensure efficient and safe airport operations, our training institute will play a pivotal role. It will nurture a proficient, knowledgeable, and sustainable talent pipeline, exemplifying a more industry-driven approach to India's skill development initiatives."

Upon successful completion of the comprehensive training program, candidates will be awarded a "Certificate in Ground Handling and Airport Operations" and subsequently placed at one of AISATS' six operational stations throughout India. This initiative not only provides a

structured pathway for aviation enthusiasts to enter the industry but also ensures a consistent supply of qualified professionals to meet the escalating demands of India's rapidly expanding aviation sector.

This strategic collaboration represents an innovative model for developing Indian talent in the aviation industry, aligning closely with the objectives of the Pradhan Mantri Kaushal Vikas Yojana (PMKVY). By offering specialised training for critical roles such as ramp agents, baggage handlers, customer service agents, and load control agents, AISATS endeavours to address India's skill gaps and prepare a workforce specifically tailored to meet the exact requirements of the aviation industry.

SBI Foundation Announces Asha Scholarship Program 2024

A scholarship program to support 10,000 of India's brightest students

SBI Foundation, the CSR arm of the nation's largest bank, State Bank of India, has announced the 3rd edition of its flagship Asha Scholarship Program guaranteeing support to 10,000 meritorious students from underprivileged backgrounds nationwide.

Students from Class 6 to postgraduate level can now access scholarships ranging from Rs 15,000 to INR 20, 00, 000 in a year. The program offers specialized categories for school students, undergraduates, post-graduates, as well as those enrolled in IITs and IIMs in India. Specifically, the 'Study Abroad' category designed for SC and ST students will act as a major aid to them in pursuing

Masters and above from eminent institutions worldwide.

The Asha Scholarship program is dedicated to identifying and supporting meritorious students from the most underserved backgrounds, with a mission to make quality

higher education accessible for young Indians. Since its inception in 2022, the scholarship program has provided timely financial support to the tune of ₹3.91 crore to 3, 198 students.

Speaking about the initiative, Challa Sreenivasulu Setty, Chairman, State Bank of India highlighted its vision, "Asha Scholarship embodies SBI's core value of service beyond banking, and being an active contributor to our nation's steady march towards progress and prosperity for all. We are proud to be expanding this transformative initiative to 10,000 students this year. Asha Scholars will play an important role in achieving our Nation's vision of a Viksit Bharat by 2047."

Coinciding with Independent India's 77 years of continued progress, the program aims to nurture and mentor young Indians as leaders and change-makers for the future.

The Asha Scholarship program is dedicated to identifying and supporting meritorious students from the most underserved backgrounds, with a mission to make quality higher education accessible for young Indians.

DRI installs solar street lights to illuminate the outskirts of Dadhikar village in Alwar

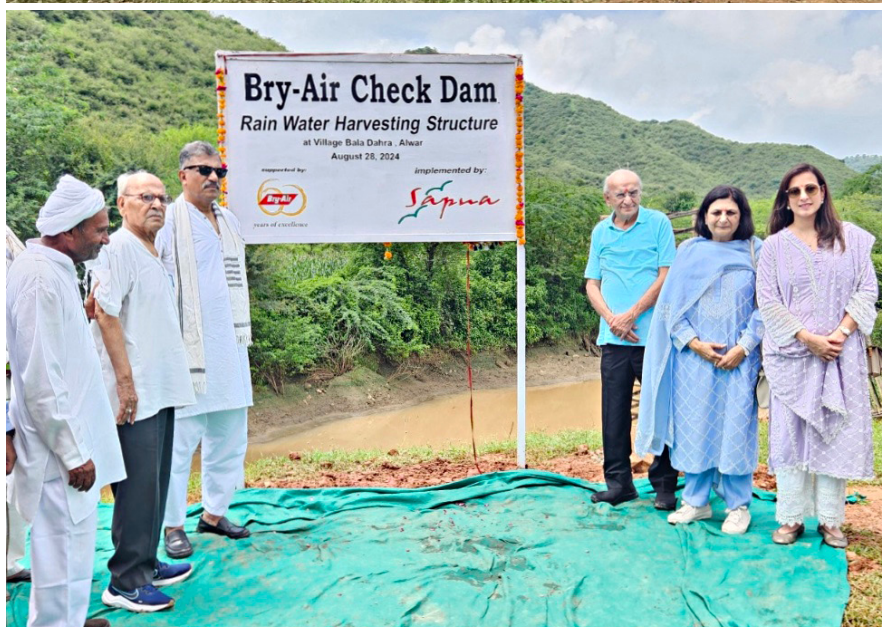
The initiative aspires to instill a sense of security and safety among the locals with the installation of the solar street lights

Desiccant Rotors International Pvt. Ltd., a flagship company under the Pahwa Group, has installed Solar Street Lights in the outskirts of Dadhikar village, Alwar as part of its CSR activity.

The project aims to enhance the electrical infrastructure of the village by improving the lighting condition of the region.

As part of the initiative, 25 solar street lights will be installed in the initial phase to illuminate the stretch of street remaining dark during the night. Serving the purpose of improving, safeguarding, facilitating, and encouraging vehicular and pedestrian traffic during the night, the installation is estimated to benefit more than 7,500 people residing in the village.

The village is situated in the neighbourhood of Sariska Tiger Reserve and animals from the buffer zone of reserve tend to enter the village after sunset. This makes it difficult to carry on the activities after dusk in the buffer zone of the village. Recognizing the challenge faced by the locals, DRI worked closely with Sapna NGO to install solar-powered street lights for enhancing the safety of the people. In the process, it will also protect the villagers and domestic animals from wild animal attacks such as snakes



and jackals, which are very common in the area after sunset.

Focussing on sustainable rural development, the initiative will have a transformative impact on the lives of residents. It will facilitate continuity of activities and enable ease of commutability even during night due to better illumination. Additionally, it will also ease movements during the evening hours on rainy days. The initiative will be instrumental in creating a sense of security among the residents at evening and night. They will be able to continue with their tasks without any hindrance

or fear of accident or animal attack. The inauguration was done by Deepak Pahwa, Director, Desiccant Rotors, and Vinita Pahwa, Director Desiccant Rotors as the Chief Guest (s) of the program. The event was also attended by Mrs Anandita Pahwa, Head-CSR Initiative, Pahwa Group, Sudhir Pratap Singh, General Secretary, Sapna NGO, Prof Ranveer Singh, Treasurer Sapna NGO, Bhumi Sarpanch of the village and villagers of the Dadhikar village, Alwar.

Speaking on the occasion, Vinita Pahwa, the Director of Desiccant Rotors said, "The solar street light

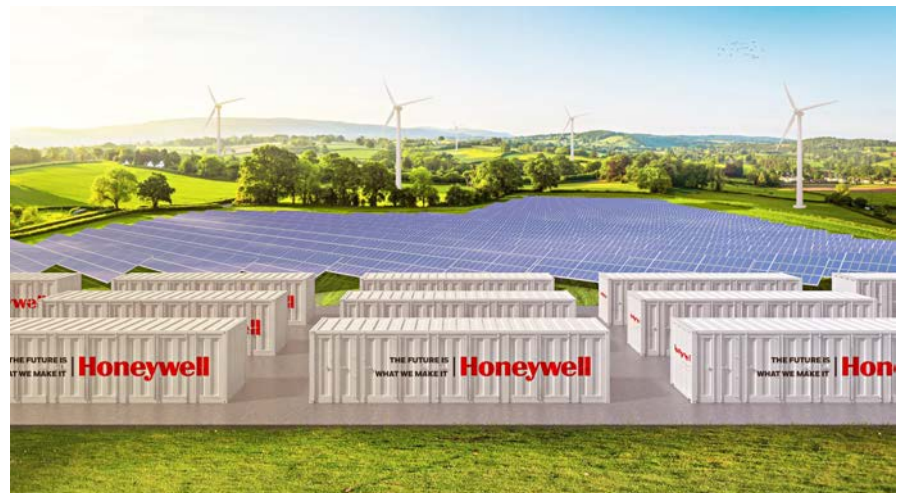
project is a testament to our commitment to upgrading the lives of underprivileged people with the help of CSR activities. The Solar Street Lights will be the source of quality illumination in the villages during power cuts in the evening hours. Thus, in cases of power cuts, many times the inhabitants depend on the light received from the Solar Street Lights. The light from the Solar Street Lights will also illuminate the premises of the adjacent households. Thus, during power cuts, the families will be able to gather outside their houses sometimes to sit under the light."

Honeywell commissions Battery Energy Storage System to help decarbonize Lakshadweep Islands in India

Honeywell Automation India Limited (HAIL) has successfully delivered and commissioned a microgrid Battery Energy and Storage System (BESS) for the Solar Energy Corporation of India's (SECI) Lakshadweep Islands project.

SECI's Lakshadweep Islands project is the country's first on-grid solar initiative that uses BESS to manage the supply of renewable power. Honeywell's BESS technologies are being integrated into the microgrid of the remote Kavaratti islands of Lakshadweep, supporting the strategic initiative of decarbonization of the islands' energy supply.

Honeywell's BESS technology includes a portfolio of solutions to help power producers store and distribute renewable energy. It includes a complete end-to-end solution that controls automation, safety, and efficiency aspects with a facility to render remote operations for battery modules and grid management systems to enable renewable power to be used within a microgrid that can also co-exist alongside national



grid supply. For the Lakshadweep project, Honeywell is supplying its Energy Management System (EMS)/ Microgrid controller and Power Plant Controller to manage the distribution of renewable energy, as well as a range of BESS sub-systems.

"We are committed to supporting India's energy transition and energy self-reliance initiative by driving constant technology and software innovation to participate in the country's Net Zero 2070 goal.

To get there, new power/energy sources will be required, including renewables. Honeywell's BESS technology is one of the fundamental enablers of this transition. The integration of our BESS technology into the Lakshadweep microgrid system is a positive step forward in this journey, and we are proud to play a critical role," said Ashish Gaikwad, Vice President and General Manager, of Honeywell Industrial Automation India.

Ambuja Cements' SEDI Empowers Youth through Skill Development in Nalagarh

Ambuja Cements, the cement and building material company of the diversified Adani Portfolio, continues to make significant strides in community development through its Skill and Entrepreneurship Development Institute (SEDI) in Nalagarh. The institute has empowered numerous individuals, helping them overcome social and physical challenges to achieve financial independence and personal growth. The inspiring stories of Najma and Amarjeet Singh showcase the transformative impact of SEDI's programs.

Life posed significant challenges for Najma from Nalagarh, following a difficult situation at home and the sudden passing of her father, the sole breadwinner of the family. Her journey towards self-sufficiency began when her cousin, who was undergoing training as an Assistant Electrician, introduced her to SEDI, Nalagarh. Desperate for employment, she enrolled in the General Duty Assistant course, and the on-the-job training at Dua Hospital, Nalagarh secured her a job opportunity at the same hospital.

A few months later, Najma joined G. Healthcare at Home Centre in Jalandhar, Punjab, where she now makes upto Rs. 25,000 each month. Her quality of life has significantly improved. Najma has been able to support her family in various obligations, including making some small investments for the future. Najma urges every youth to follow her brave footsteps and move forward towards developing a career. She testifies that training at SEDI helped her gain confidence, build self-esteem and improve her personality. Through



Ambuja SEDI Nalagarh Youth - Amarjeet Singh



Ambuja SEDI Nalagarh Youth - Najma

Ambuja Cements is transforming lives of youth in Nalagarh through its Skill and Entrepreneurship Development Institute (SEDI).

Najma from Himachal Pradesh and Amarjeet Singh from Punjab overcame significant social and physical challenges to achieve financial independence through SEDI programmes.

SEDI initiatives focus on vocational training, personal development, and sustainable livelihoods.

SEDI, she was equipped to pursue her dream and get a job she desires.

Amarjeet Singh from Chakarma village in Punjab faced a severe accident that left his leg permanently damaged, plunging his family into debt due to medical

expenses. Determined to support his middle-class family of seven, he began working at a salon and learned about SEDI, Nalagarh. After enrolling in SEDI's Assistant Beauty Therapist course, Amarjeet opened his own salon, earning Rs. 45,000 per month and employing three people.

Despite personal hardships, Amarjeet continued his work with dedication. He credits SEDI for all his success, highlighting the training's impact on his skills, confidence, and self-esteem. Amarjeet encourages others to join SEDI to achieve their dreams, emphasising the institute's role in providing meaningful employment and personal development.

Ambuja Cements' SEDI is dedicated to providing vocational training to underprivileged youth, enabling them to secure sustainable livelihoods. SEDI's programs are designed to enhance employability and promote entrepreneurship, fostering socio-economic development in communities.

Adani Foundation at ACC Chanda eliminates Gowari farmers' water insecurities with Cement Nala Bund



ACC, the cement and building material company of the diversified Adani Portfolio, is committed to facilitating modern farming and efficient water management solutions in communities where it operates. Through CSR efforts, Adani Foundation has been able to significantly impact the lives of 18 farmers by addressing long-standing water scarcity issues in Gowari village near ACC Chanda.

Gowari village, located in the Wani Taluka of Yavatmal district, has faced persistent water shortages due to unreliable rainfall and arid conditions. For 41-year-old farmer Bhaskar Ramchandra Wasekar, this challenge was a daily struggle. With only 4 hours of

water per day from his borewell, Bhaskar's ability to cultivate his 8.07 hectares of land was severely restricted, impacting his income

and future prospects. The Adani Foundation collaborated with Dilasa Janvikas Pratishthan to initiate a project to build a Cement Nala Bund (CNB), with the aim of improving water retention and recharging the groundwater table. Completed in the 2023-24, the CNB has proven transformative. Water availability on Bhaskar's land has increased by 75% to 7 hours per day, enabling him to expand his cultivable area by 11.78%, from 6.15 to 7.10 hectares.

This expansion has allowed Bhaskar to diversify his crops, including the addition of water-intensive chillies, significantly boosting his income by 35.46% to Rs. 3.22 lakh annually. "The CNB has been a blessing," says Bhaskar. "I no longer worry about water for my crops. Now, I can grow more, explore new crops, and ensure a secure future for my family. In all, similar impacts are seen across 25 hectares of farmland owned by 18 farmers from the village.

ACC and the Adani Foundation's commitment to sustainable community development is highlighted through the collaborative efforts to drive positive, life-changing results, as seen in the CNB project. The project not only enhances the livelihoods of Gowari's farmers but also instills hope and resilience within the community.

ACC and Adani Foundation construct a Cement Nala Bund (CNB) in Gowari village to address water scarcity faced by Bhaskar Wasekar and other farmers.

This structure has recharged the groundwater table, increasing the number of functional borewells, and expanding cultivable area by 11.78%.

Owing to this, Bhaskar's income from farming has gone up 35.46%, reaching Rs 3.22 lakh annually.

25 hectares of farmland belonging to 18 farmers from the village benefits from this CNB.

Britannia's AI campaign reaches rural India where the internet doesn't

Parvarish Ki Baat Papa Tripathi Ke Saath' uses Generative AI and Pankaj Tripathi's voice to Connect with Consumers on Parenting

As a part of its ongoing conversation on parenting being a shared endeavour (Growth needs both), Britannia Milk Bikis, in partnership with GroupM's media services agency Mindshare India, has launched a first in-India campaign 'Parvarish Ki Baat Papa Tripathi Ke Saath.' This unique campaign blends tradition with technology to engage parents in meaningful conversations about shared parenting roles.

The campaign, conceptualized by MullenLowe Lintas Group, roped in the voice of Pankaj Tripathi with an interactive voice response system (IVRS). Pankaj Tripathi, lovingly known as Papa Tripathi shares relatable insights on parenting. Delivered in the local dialects of Uttar Pradesh, these messages encourage parents to participate in their child's growth and development actively.

In a country where connectivity and technology vary, and access to 4G and smartphones is limited, the heart of this campaign is its adaptive, data-light platform designed specifically for feature phone users. It uses real-time data to tailor voice messages that suit each parent's environment, ensuring the conversation is always timely and relevant. Over a series of calls, the messages evolve to highlight various aspects of parenting and subtly include

Britannia Milk Bikis biscuits. The campaign culminates in an interactive conference call using mSamwaad, India's largest audio conferencing bridge solution that uses the power of telecom to connect and engage the audience with Pankaj Tripathi's AI model, where parents can have their questions answered.

Amit Doshi, Chief Marketing Officer, Britannia said, "Britannia Milk Bikis has long supported parents by providing easy-to-access tools that support better parenting techniques with campaigns like Adengappa. With 'Parvarish Ki Baat Papa Tripathi Ke Saath,' we are taking this a step further by combining



technology with trust to facilitate open conversations about shared parenting responsibilities. The campaign uses inclusive tech solutions strategically crafted to reach consumers across diverse demographics in low-connectivity areas, ensuring that every parent, no matter where they are, can get insights about shared parenting. This reflects Britannia's ongoing commitment to leveraging new-age technology to make meaningful connections with our consumers across India."

Amin Lakhani, Mindshare Chief Executive Officer for South Asia said, "In the vast landscape of Rural Bharat, there is a pressing need for solutions that transcend beyond the reaches of the internet. For regions

with limited smartphone penetration, our smart solutions for feature phones foster meaningful dialogues with consumers on a significant scale. As marketers, we enable our clients to engage meaningfully through inclusive tech stacks infused with creativity, ensuring connection across the diverse tapestry of many Indias. By harnessing creativity, voice telephony, WhatsApp, Gen AI, and vernacular elements, we pave the way for a new era of personalized solutions for Rural consumers."

Ram Cobain, Chief Creative Officer, Mullen Lintas, "Pankaj Tripathi is very well known; but the sticky 'Papa' Tripathi is a fresh character we've come up with. In his latest, most natural role, Papa Tripathi digs deep and offers personalized parenting tips to mothers and fathers in UP. This campaign fuses the time-tested IVR system with the latest Gen-AI and some never-out-of-fashion creativity. Cold calls are generally a nuisance – these promise to be both heartwarming and invaluable."

Additionally, the campaign integrates seamlessly with WhatsApp. By opting in, parents can receive personalized messages with captivating content to encourage them with parenting.

Pankaj Tripathi's longstanding association with Britannia through campaigns like 'Growth aur Masti ka Partner' aka partner in both growth and fun has highlighted the modern take on parenting by showcasing relatable, enjoyable real-life moments, emphasizing the importance of balancing discipline with fun in a child's upbringing.

Ambuja Cements launches new After School Programme to help nurture future athletes of India

Ambuja Cements, the cement and building material company of the diversified Adani Portfolio, is committed to empowering the youth of India. Through CSR efforts, the Company has recently launched a new After School Programme across its operational areas. This programme, designed to identify and nurture sporting talent, has so far been implemented at Ambuja Cements-supported schools around its Bathinda, Chandrapur, Darlaghat and Nalagarh plants.

The After School Programme, in collaboration with ELMS Sports Foundation, provides students with specialised sports training, mentorship, nutrition guidance, and opportunities for growth in various disciplines. It also identifies students who display a passion and potential for excelling in sports, offering them a platform to hone

their skills and reach their full athletic potential.

The programme focuses on providing high-quality coaching by experienced professionals, ensuring students receive expert guidance and training. Furthermore, it emphasises the importance of nutrition in achieving peak athletic performance and provides students with personalised nutrition plans and guidance to fuel their training and enhances their athletic capabilities.

The After School Programme further complements Ambuja Cements' existing sports promotion programme, which already encourages participation in school-level and inter-school competitions and at Khelo India level too. The programme has seen significant success with students from Ambuja-supported schools participating in various disciplines, including athletics, kabaddi,

kho-kho, badminton and volleyball. Several students have also been selected for prestigious Khelo India events. Additionally, Ambuja Cements-supported schools in Chandrapur as well as Ambujanagar have also introduced self-defence training for all children, with a focus on the safety of girls. This year, the Ambuja Cements-supported schools in Bhatapara have also introduced martial arts training.

Ambuja Cements' dedication to fostering a culture of sportsmanship and empowering young athletes to pursue their dreams is highlighted with the introduction of these new initiatives and programmes. It also focusses on ensuring equal opportunity for all without any biases. These not only help nurture individual talent, but also contribute to the development of a robust sporting ecosystem across the nation.

ASDC at ACC Galgal empowers transformative journey of young woman from Barmana through upskilling course

ACC, the cement and building material company of the diversified Adani Portfolio, remains committed to transforming lives through upskilling with the Adani Skill Development Centre (ASDC), under the Adani Foundation. One such transformative story is of Kanchan, a determined young woman from Barmana village in Bilaspur near the ACC Galgal plant.

Born into modest means, Kanchan faced many hardships. After her father's demise, her mother, Anita Devi, supported the family alone. Despite their struggles, Kanchan's spirit remained strong. Inspired by her mother's



work at the ASDC Galgal, she enrolled in the Retail Sales Associate course at ASDC, Galgal.

Determined to uplift her family's fortunes, she pursued her training with dedication and received her

certification. This led her to a job at a retail apparel chain outlet in Hoshiarpur, Punjab, with a monthly salary of Rs 18,000. Her journey from adversity to achievement highlights the transformative power of skill development.

Kanchan's success story highlights the significant role of ASDC in empowering the youth with valuable skills and employment prospects. ASDC's initiatives align with national priorities and the UN Sustainable Development Goals (SDGs).

ACC along with the Adani foundation are dedicated to fostering sustainable livelihoods and inclusive growth amongst communities across the nation.

Aranyakaa Farms Unveils Its Landmark 10th Project: H2O – A 61-Acre Sustainable Farmland Championing Water Conservation

Leading the way in innovation, Aranyakaa Farms have launched their latest sustainable farmland project called H2O – Harvesting a Brighter Tomorrow. Spanning 61 acres, this path-breaking initiative is located at Beragai near Bangalore aimed at addressing the city's growing water shortage through innovative water conservation measures.

The project, which is ideally located 42 kilometers from Sarjapur – Outer Ring Road Junction Bellandur and 30 kilometers from Whitefield, aims to create a water-secure future for the region. Following Bangalore's serious water crisis in March 2024, H2O was proposed as a solution to the city's long-term water supply problems. With a focus on sustainability, the initiative envisions a better tomorrow in which water supplies are safeguarded for future generations.

Named H2O - Harvesting a Brighter Tomorrow, the project's vision stems from the belief that the next 15 years are crucial for Bangalore to become entirely water-sufficient. It therefore stresses that water preservation must start now to guarantee well provided resources ahead. H2O emphasizes Aranyakaa Farms' ongoing dedication to sustainable development and community welfare. The H2O project features advanced water preservation techniques, including the installation of 20-30 rainwater harvesting recharge pits to replenish underground water sources. It also incorporates recharging wells for deep water infiltration and man-made lakes for above-ground water



storage. These initiatives are designed to address and manage water challenges effectively over the next 10 years.

The project is characterized by a two and a half-acre man-made lake, which contributes to the conservation of local Hydrosphere while maintaining the Water Table which enhances its attractiveness while

making it a sustainable development. These projects are intended to make H2O a reference point in environment friendly water management that covers both subsurface and surface needs. On top of saving water, this program will incorporate various sustainable designs that promote eco friendly lifestyles and community involvement. The

highlights comprise a Sustainable Clubhouse spanning across 4 acres and constructed using green architecture principles; a Gaushala advocating organic, sustainable farming; Biopool providing natural swimming experience; Temple aimed at spiritual bonding in society.

The Project is also located in the soon to Boom Hosur Economic Corridor (HEC) which will soon have an Airport, Industrial and technology parks and better connectivity due to the development of the STRR, PRR and Metro Connectivity

which will also give a long term appreciation for the land in itself. For a more appealing vacation home, nearby attractions include Krishnagiri Fort, Hogenakkal Falls, and Shoolagiri Hills.

The mix of these constituents is geared towards a tranquil, green setting where nature and society can coexist in harmony. “We are extremely excited to unveil our Code Name H2O initiative that is designed to address one of the most crucial problems confronting Bangalore - water scarcity. This project will

have a far reaching impact on the wellbeing of the community and environment as it incorporates innovative methods for conserving water,” said Amit Porwal, Director at Aranyakaa Farms.

Aranyakaa Farms has further solidified its position as a leader in sustainable farming developments with the launch of H2O. The company is committed to initiatives that not only provide investment opportunities but also contribute positively to the environment and local communities.

Himalayan continues its commitment to uplift the Himalayan Communities

Celebrates ‘Himalayan Day’ with an initiative to train Kashmiri saffron farmers.

Himalayan Elevation Kashmiri Saffron, a brand from Tata Consumer Products celebrated Himalayan Day.

The Himalayan Day is celebrated on 9th September every year and is an annual initiative dedicated to preserving and uplifting the unique Himalayan ecosystem and its communities. This year, the focus is on supporting the saffron farmers of Pampore, Kashmir, who are facing challenges due to declining yield of Kashmiri Saffron.

As part of this year’s initiative, the brand in collaboration with Matamaal Foundation will be training Kashmiri Saffron farmers starting September, with on-ground sessions planned till October.

100% of the proceeds from all packs of Himalayan Elevation Kashmiri Saffron sold online, in the week of this Himalayan Day, will be



used to train these farmers. These training will equip them with the knowledge and tools needed to cultivate saffron more efficiently, ensuring the sustainability of their craft.

This initiative is in line with the brand’s commitment to giving back to the communities that are integral to the Himalayas. With this initiative, not only is the brand providing training to the saffron farmers of Kashmir to combat the declining yield but also giving them the hope they need to continue their craft in

the face of environmental challenges. This initiative reflects the brand’s belief in the importance of sustainability and its dedication to making a positive impact on society.

Consumers can scan the QR code on the back of each Himalayan Elevation Kashmiri Saffron pack to see the specific farmer whose livelihood they have helped uplift. This initiative thus allows consumers to see firsthand the impact their purchase is making on the lives of these farmers.

APM Terminals Pipavav Enhances Community Health with Eye Check-up Camp; Benefiting 221 Villagers



APM Terminals Pipavav has successfully conducted an eye check-up camp benefiting 221 villagers from Rajula and surrounding talukas in collaboration with Sudarshan Netralaya, Amreli, and Gayatri Parivar Trust. This initiative highlights APM Terminals Pipavav's ongoing commitment to enhancing community health and well-being.

Since 2017, APM Terminals Pipavav has organized bimonthly eye check-up camps as part of its continuous health care efforts. These camps provide on-site Outpatient Department (OPD) treatment and help identify patients who require advanced care. Those diagnosed with conditions such as cataracts and other eye diseases are referred

to Sudarshan Netralaya for free surgery, ensuring critical eye health needs are addressed without financial burden. Projects span over 75 villages across Rajula, Khambha, and Zafarabad Talukas. Since their launch, these camps have provided OPD treatments to more than 5,000 villagers and facilitated over 1,000 cataract surgeries. The recent eye check-up camp demonstrates the company's sustained efforts to support and uplift the local population.

In addition to these eye check-up camps, APM Terminals Pipavav supports the local community through various health initiatives. These include a Port Medical Center and a Mobile Health Unit that regularly visits Rampara, Bherai, Shiyalbet, Thavi, Divalo, Devpara, Padar and

Truck Parking Area. The company also maintains an Advanced Life Support Ambulance, equipped to handle emergencies and transport patients to hospitals. Each month, over 2,000 villagers benefit from these health services, emphasizing APM Terminal Pipavav's dedication to providing accessible and comprehensive health care.

The Company's commitment extends beyond medical care, actively engaging in health and nutrition awareness programs. By addressing both immediate medical needs and long-term health education, APM Terminals Pipavav remains devoted to its mission of delivering quality health care and contributing positively to the lives of the people it serves.

NIIT Foundation & Spandana Sphoorty Financial Limited Empower Communities

NIIT Foundation, in partnership with Spandana Sphoorty Financial Limited (SSFL), has introduced a Digital & Financial Literacy Program aimed at empowering communities. This initiative offers a 5 hour training course designed to allow the participants aged between 18 to 60 with personal finance management skills and digital literacy. The program aims to bridge the knowledge gap in financial planning and digital transactions, addressing a critical need in today's rapidly evolving economic landscape.

The program will be covering essential topics such as budgeting, savings, investments, loan management, insurance, and digital payments. The initiative equips individuals with the tools to make informed financial decisions, plan for their future, and navigate the digital financial ecosystem. The training is structured to be both accessible and practical, focusing on real-world applications of financial concepts that can lead to improved financial well-being and quality of life for participants.

"Despite being one of the fastest-growing economies in the world – with over 100 million credit cards (as of February 2024) – only around 27% of our population is

financially literate. With that in mind, SSFL has partnered with NIIT Foundation to enhance financial empowerment in beneficiaries, resonating with our firm belief that financial empowerment is key to community development. This program reflects our commitment to fostering financial inclusion and digital literacy, which are crucial skills in today's economy," said Bhanu Prakash, Vice President – CSR & Sustainability at SSFL.

In an era of increasing digital financial transactions, the program recognizes the critical importance of cybersecurity awareness. A significant portion of the curriculum is dedicated to educating participants about various online frauds, including ATM skimming, phishing, vishing, and mobile wallet scams. This aspect of the program addresses the growing need for digital vigilance, ensuring that as individuals become more financially literate, they are also equipped to protect themselves from cyber threats and financial fraud.

Further highlighting the significance of the program, Charu Kapoor, Country Director at NIIT Foundation noted, "While financial/economic concepts like inflation and recession are well-known to the masses,

concepts like saving accounts, budgeting, making financial plan, digital banking system and interest rates are often overlooked, resulting in higher financial illiteracy among people. A survey conducted by the RBI indicates that 41% of the respondents do not have a monthly budget – which potentially leaves them in an unstable, unpredictable financial situation. Through this collaboration with SSFL, we aim to reach out to rural communities across 6 States (Madhya Pradesh, Maharashtra, Uttar Pradesh, Bihar, Telangana and Odisha) and provide them with the tools they need for financial stability and success."

Looking ahead, the initiative aims to train 20,000 beneficiaries across 6 states in India. The partners are committed to continually updating the curriculum to address emerging financial trends and cybersecurity challenges, ensuring that participants are well-prepared to thrive in an increasingly complex financial world. Through this initiative, SSFL and NIIT Foundation aspire to create a lasting impact, fostering a culture of financial prudence, digital savviness, and cybersecurity awareness that will benefit individuals and communities for years to come.

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Infosys Foundation Enables Record-Setting Volunteering Initiative: Over 200,000 Seedballs Made for Reforestation Projects across India

This achievement marks the start of a month-long series of volunteering activities, across Infosys campuses in India, dedicated to community engagement and environmental sustainability

Infosys Foundation, the philanthropic and CSR arm of Infosys, has kicked off its 'Month of Gracious Giving' initiative this September across Infosys Development Centers in India.

As part of this inaugural initiative, Infosys employees participated to produce over 200,000 seedballs in an hour. These seedballs will be used for reforestation projects across more than 20 locations in India, helping restore native flora, promote biodiversity, and support local ecosystems.

A wide variety of native plant seeds such as Neem, Tamarind, Sandalwood, Teak, and Mahogany, will be planted in designated reforestation areas across India, including Bannerghatta National Park in Bengaluru, Utkalmani Gopalbandhu Ashram Grounds in Bhubaneswar, and the Yeoor Hills in Mumbai.

This record-setting achievement marks the start of a month-long series of employee-focused volunteering activities at Infosys dedicated to community engagement and environmental sustainability. It will also feature various other volunteering activities aimed at encouraging employees to engage in community service, educational outreach, and environmental conservation projects, further reinforcing Infosys Foundation's commitment of giving back to society.

Shaji Mathew, Trustee, Infosys Foundation, said, "The 'Month of Gracious Giving' stands witness to Infosys Foundation's continued commitment towards making a positive impact on society. The seedball initiative is part of our broader effort to make volunteering a key part of our culture, allowing Infosys to create a lasting impact on the environment and communities. Through this initiative we set an example of what can be accomplished when we collectively work towards a common goal. This accomplishment also reflects Infosys' long-standing

dedication to ecological stewardship and social responsibility."

Neelam Kapoor, Head of Wonder Book of Records, said, "We are delighted to recognize Infosys Foundation for their outstanding support in our mission to plant 200,000 seedballs. This initiative is about more than just planting seeds—it's about planting hope, resilience, and a vision for a greener tomorrow. Infosys Foundation has demonstrated true leadership and commitment to sustainability by joining hands with us to breathe new life into barren lands. Together, we are nurturing a future where our planet thrives, and we are proud to honour Infosys for being a vital part of this transformative journey."

Through its various environmental support initiatives, Infosys has planted over a million trees across its Development Centers including its Mangalore SEZ campus, where over 500,000 trees have been planted. The reforestation efforts at Mangalore ensured trees native to the region transformed the barren land into a lush green rainforest.

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Researchers and conservationists say lack of funds and understaffing are leading factors contributing to the problem, with ineffectively managed protected areas needing an estimated US\$17 million to prevent deforestation and provide conservation and climate benefits. Image: USAID Asia, CC BY-SA 3.0, via Flickr.

SOUTHEAST ASIA'S PROTECTED AREAS COULD DO BETTER WITH MORE RESOURCES

As countries expand their protected areas to meet the ambitious goal of protecting 30 per cent of land and sea by 2030, many newly established protected areas are failing to stop deforestation, leading to biodiversity loss and carbon emissions, writes **Spoorthy Raman**

For the last two decades, countries around the world have been in a frenzy to earmark large swaths of their lands and waters as protected areas to meet the ambitious “30 by 30” target that calls for 30 per cent of Earth’s land and seas to be legally protected by 2030.

Governments are expanding existing protected areas and setting up new ones to prevent deforestation, conserve biodiversity and reduce planet-warming greenhouse gas emissions.

But how well are these protected areas working? That’s a question an international team of researchers explored in the context of 80 protected areas established between 2007 and 2014 across Southeast Asia.

In a new study published in the journal *Current Biology*, they report that more than half of these protected areas failed to stop deforestation, resulting in a loss of 72,497 hectares (179,144 acres) of forests — an area twice as large as the US city of Detroit.

“In the last 15 years, protected areas expansion was the key conservation mechanism in Southeast Asia and elsewhere in the world, but not all Southeast Asian countries have the financial abilities to build protected areas so fast,” says lead author Sreekar Rachakonda, now a postdoctoral researcher at the University of Queensland, Australia, who was at the National University of Singapore during the study.

“We wanted to see how these protected areas are faring after they were established.”

Effective and ineffective protected areas

Using satellite images captured between 2000 and 2020, the researchers used a computational model to compare the 80 protected areas with neighbouring patches of unprotected forests. They then determined whether the “protected



It is not just important to expand protected areas. To make sure they work, to continue to manage them and provide them sufficient funding and support so they can continue to function well for biodiversity and for the climate.

—ZENG YIWEN

Researcher, Nanyang Technological University

area” designation had reduced deforestation in these areas compared to the rates in neighbouring unprotected tracts of forests.

The study found that only 36 of the 80 protected areas were effective in reducing deforestation rates. Collectively, these areas averted a loss of 78,910 hectares (194,991 acres) across Southeast Asia, which translated to preventing 8,821 hectares (21,797 acres) of forest loss annually. While deforestation rates were not zero in these areas, they were less than what they would have been had these forests not been protected.

The averted forest loss benefited 91 species of threatened birds and 98 species of threatened mammals, including the Mindanao spiny rat (*Tarsomys echinatus*), a vulnerable species endemic to Mount Kitanglad Range National Park in the Philippines. It also resulted in significant climate benefits by reducing emis-

sions by 2.10 metric tons of carbon dioxide equivalent per year, comparable to the total emissions of the tiny Himalayan kingdom of Bhutan in 2021.

The remaining 44 protected areas experienced similar or higher rates of deforestation than they did before their designation, and were thus deemed to be ineffectively managed. These 44 protected areas failed to prevent 72,497 hectares of forest loss and emissions of 2.07 metric tons of CO₂ equivalent per year. The researchers say that had these protected areas been effective, the climate benefits from protected areas in the region would have doubled.

These 44 protected areas are home to 121 species of threatened birds and 105 threatened mammal species. These include the forest-dependent white-browed nuthatch (*Sitta victoriae*), an endangered bird endemic to Nat Ma Taung National Park in western Myanmar that has lost almost 18 per cent of its forest cover since its establishment in 2010; the Seram masked owl (*Tyto almae*), endangered Seram bandicoot (*Rhynchomeles prattorum*) and dusky mosaic-tailed rat (*Melomys aereus*), all endemic to Manusela National Park on Seram Island, Indonesia.

“We agree with their findings that ineffective protected areas management leads to deforestation and biodiversity loss,” says James Bampton, WWF’s regional forest lead for Asia Pacific, who wasn’t involved in the study but is familiar with protected areas management in the Greater Mekong region. “Good habitats are necessary for conservation, but it’s not sufficient on its own.”

Why new protected areas become ineffective

While protected areas are critical for conservation, effectively managing them requires both money and trained staff, neither of which are always readily available. Protected

areas need funding to not only set up but continue day-to-day operations.

They must pay guards, train staff, procure equipment such as GPS trackers for monitoring, patrol areas, buy food and fuel, and install boards and signage. The study found that the 44 ineffective protected areas, spanning a combined 1.5 million hectares (3.7 million acres), need at least US\$17 million to improve their management.

“A lot of tech costs money, and government budgets are quite tight for protected areas management,” says Malaysia-based conservation scientist Gopalasamy Reuben Clements, citing his own experience of helping authorities set up Kenyir State Park in Malaysia through his NGO, Rimba. “Federally managed protected areas or national parks seem to get more funding, but when we go to the state government parks, the funding gap is wider.”

It’s a reality reflected in the study’s findings, too. The effectiveness of PAs increased with an increase in funding. The correlation between per capita GDP and the effectiveness of protected areas was quite strong, suggesting that richer countries tend to have more effective protected areas.

Given the lack of funding for protected areas, the study’s authors say their findings can help countries decide whether to continue expanding ineffective PAs or redirect funding to improve the effectiveness of existing ones. The latter is easier because the paperwork is in place and establishment costs are already paid.

“It is not just important to expand protected areas,” says study co-author Zeng Yiwen from Nanyang Technological University, Singapore, adding that it’s critical “to make sure they work, to continue to manage them and provide them sufficient funding and support so they can continue to function well for biodiversity and for the climate.”

However, setting up new protected areas can be easier than sustaining existing ones because many grants and philanthropic funds are available for the former.

“Once you set up a protected area, that’s when the money pot shrinks,” Clements says, explaining that funders assume the onus is now on the governments to take up the funding to manage these areas. “But in reality, there’s still some transition funding needed and I don’t see any examples of transition funding for newly formed protected areas.”

As a sustainable finance specialist at the Zoological Society of London, Clements now helps organisations in Southeast Asia develop projects harnessing nature-based solutions.

Iding Achmad Haidir, a forester who until recently worked with the Indonesian Ministry of Environment and Forestry that manages the country’s forests, says funding and staffing challenges are severe in protected areas that aren’t national parks.

“In Indonesia, national parks have more funding and human resources intervention compared to nature reserves and other [types of] protected areas,” he says, noting that, unlike national parks, reserves are managed at the provincial level.

While the current study didn’t find any differences between effective and ineffective protected areas based on their IUCN protected areas categories, it found that those that reported their management objectives to the IUCN, the global wildlife conservation authority, performed better than those who did not. This suggests that non-reporting parks were more likely to be “paper parks” — protected areas that exist on paper but have no conservation impact.

Can carbon markets address funding gaps?

The researchers say Southeast Asian countries could explore carbon markets and nature-based carbon credits to generate income through projects

that incentivise conservation. Per their estimates, the potential for offsetting emissions in currently ineffective protected areas in Southeast Asia translates to US\$12 million in the current carbon market — an amount that could cover a significant portion of the US\$17 million needed to fund ineffective protected areas.

However, relying purely on such market-based mechanisms has its drawbacks. “With any market-based approach, there is a risk of market crashes,” Zeng says. “It brings risks within the lifetime of a project.” Instead, he says, blended finance, with its mix of public and private funding to manage protected areas, can alleviate the risk.

Carbon credits and related mechanisms also demand “additionality,” or proof that emissions reductions occurred because of the project. This, Clements says, can be a challenge.

“The criteria for qualifying for additionality is getting more stringent, and they are not empathetic to the plight of newly created protected areas where you need a transition time of five to 10 years to make them work.” Besides, well-managed protected areas would need more time to qualify for additionality because their emissions are already low. “Budgeting that combines multiple financing streams — that’s the Holy Grail for protected areas managers — and it requires co-funding from the public, private and civil society sources,” WWF’s Bampton says, adding that countries could explore biodiversity credits, selling forest products, eco-tax breaks and ecotourism.

Ultimately, though, there must be political will to fund protected areas, he says: “Conservation is an ongoing thing — it always needs support and adapting to the situation.” ☐

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(Source: <https://www.eco-business.com/news/southeast-asias-protected-areas-could-do-better-with-more-resources/>)

METHANE SLIP FROM LNG SHIPS JEOPARDISING NET ZERO GOALS IN MARITIME SECTOR

WITH THE SHIPPING SECTOR RESPONSIBLE FOR ABOUT 3 PER CENT OF GLOBAL ANTHROPOGENIC METHANE EMISSIONS, LEVERAGING EXISTING SOLUTIONS WILL GREATLY HELP AMID LACKLUSTRE REGULATIONS, WRITES SIVA SELAN



Methane emissions from ships have ballooned in the last decade, increasing by 150 per cent between 2012 and 2018 due to the rapid growth in the use of LNG as a marine fuel. Image: Jakez Bo/Flickr

Imagine a scenario where a greenhouse gas with more than 80 times the heat-trapping potential of carbon dioxide is allowed to be freely released into the atmosphere from ships with little to no consequences. While this may sound unthinkable, this is the reality that the global shipping sector is experiencing every time methane leaks into the air – allowing fleets to sail on scot-free.

Compounding the issue is the maritime industry, which is alone responsible for roughly 3 per cent of global anthropogenic methane emissions. Estimates note that the increase in methane emissions is responsible for up to 30 per cent of the global temperature rise since the Industrial Revolution.

There is growing evidence that ships that transport or run on liquefied natural gas (LNG) in particular are responsible for a bulk of methane emissions due to methane leaking or “slipping out” from their engines during the combustion process.

LNG is natural gas that has been cooled down to liquid form to reduce its volume for ease of transportation and storage. While it emits lower carbon emissions and particulate matter compared to traditional marine fuels like heavy fuel oil, LNG produces significant methane emissions throughout its lifecycle via unintentional leaks.

This is deeply concerning, and why growing methane emissions

from LNG carrier fleets as well as the uptake of LNG as propulsion fuel must be curbed in the near term to achieve net zero by 2050, said Panos Spiliotis, senior manager of EU transport and global shipping lead at the Environmental Defense Fund (EDF), a global non-profit organisation focused on tackling climate change and environmental issues.

Without additional policy action, shipping’s greenhouse gas (GHG) emissions are projected to increase by 16 per cent from 2018 to 2030 and by 50 per cent by 2050.

The International Maritime Organisation’s (IMO) Fourth Greenhouse Gas Study 2020 found that methane emissions from ships have ballooned in the last decade, increasing by 150 per cent between 2012 and 2018 due to the rapid growth in the use of LNG as a marine fuel. The IMO is a specialised agency of the United Nations responsible for regulating international shipping.

One of the main reasons for this is that methane is not regulated by the IMO compared to other individual

pollutants like sulfur oxides, nitrogen oxides, and carbon dioxide.

“Regulations on these pollutants propelled the uptake of LNG – which are mostly methane – as a marine fuel. This is because it contains no sulfur, can achieve low nitrogen oxide emissions, and emits about 25 per cent less carbon dioxide than conventional marine fuels,” said Bryan Comer, marine programme director of the International Council on Clean Transportation (ICCT), a non-profit research organisation focused on improving the environmental performance and energy efficiency of road, marine, and air transportation.

Methane emissions from ships, Comer added, must be reduced because they are 80 times more potent than carbon dioxide with a 20-year global warming potential.

“Methane is responsible for about 30 per cent of the global rise in temperature. Reducing it is one of the most effective ways to limit near-term climate warming and is central to the efforts to limit global warming to 1.5°C.”

LNG AND ITS EFFECTS

Reducing methane emissions from ships is crucial to achieving net zero with shipping industry emissions growing, especially via methane slip. Methane slip is a process where unburned methane is unintentionally released into the atmosphere during the production, transportation, and use of natural gas.

The ICCT's Fugitive and Unburned Methane Emissions from Ships (FUMES) study shows that the rate of methane slip from the most common LNG marine engine is 6.4 per cent on average. This is more than double that of European Union estimates of 3.1 per cent and almost twice as high as IMO approximations of 3.5 per cent. The ICCT also traced fugitive methane emissions along the LNG supply chain, measuring between 24 to 40 kilogrammes of methane emissions emitted per hour when large LNG carriers offloaded their cargo at a European LNG terminal, with the ships' LNG engines alone emitting 8 kgs of methane per hour.

"While the amount of methane released from these ships as a percentage of the cargo unloaded may be small, the methane emissions rates from the unloading operations are greater than those from the highest-emitting marine engines," Comer said.

Within Asia, there are also concerns that growing LNG hubs in the region may significantly add to existing emissions, with nations such as Thailand, Vietnam, and the Philippines expanding LNG import capacity in recent years.

Another nation that has seen growth is Singapore, which traded about US\$240 billion worth of LNG in 2022, with imports increasing by 35 per cent the following year.

LNG constitutes about half of Singapore's gas imports, according to Lu Ming Pang, Gas and LNG research senior analyst at Rystad Energy, an independent energy research and business intelligence company.

"Singapore consumes about 13 billion cubic metres of gas, coming into the country by way of pipeline natural gas or LNG. It imported about 5.8 million tonnes of LNG in 2023, or equivalent to 7.8 billion cubic metres of natural gas," Pang said.

Singapore LNG, the city-state's largest LNG terminal, supplies roughly 9 million tonnes per annum (MTPA) of LNG, with a peak capacity of 11 MTPA, he added.

While these numbers may be concerning from a methane emissions standpoint, Pang pointed out that methane leaks generally stem from older carriers, which use low-pressure engines. The high methane-emitting carriers identified in the ICCT's FUMES study, for instance, all use low-pressure, dual-fuel 4-stroke engines. They are also the most common LNG engines globally.

Newer LNG carriers, he noted, are more likely to be fitted with high-pressure engines allowing for less methane slip. "The bulk of LNG-capable new-builds will employ new high-pressure engines that will significantly reduce methane slip, allowing emission intensity levels that are lower than conventional bunker fuels," Pang said. But until LNG carriers that run using high-pressure engines are more prevalent, the city-state will have to find ways of managing emissions as its LNG hub grows.

The IMO has been working to regulate other greenhouse gases like methane as a result of increased GHG emissions.

Singapore should nonetheless stick to LNG in the long term for its "benefits" as an alternative fuel, he added.

"As Singapore positions itself as an LNG bunkering hub with higher standards of emissions monitoring, the shift towards cleaner alternative fuels such as using LNG with the right engine, bio-LNG, E-LNG, methanol, or ammonia, is [still] the right step to take," Pang said.

The IMO has been working to regulate other greenhouse gases like methane as a result of increased GHG emissions, added Comer, following a revision of its 2018 GHG strategy in 2023. "We expect the first IMO methane regulations to be agreed in 2025 and enter into force in 2027. These measures will include a GHG fuel standard and some form of GHG pricing."

ALTERNATIVE FUEL SOLUTIONS AND OPERATIONAL CHANGES

While shipping has traditionally been seen as a difficult sector to green, much can be done to decarbonise at present – for example, through switching to cleaner fuels or maximising fuel efficiency through operational changes.

Fully transitioning shipping to zero emissions will require large-scale industrial transformation to green hydrogen-based fuels.

Green hydrogen is produced using renewable energy to split water into hydrogen and oxygen. Unlike hydrogen from fossil fuels, it does not produce carbon emissions during production.

"The fastest way to decarbonise is to implement a set of 'quick win' energy efficiency measures that can reduce emissions substantially in the next few years and kickstart shipping's energy transition," said Spiliotis, adding that measures include wind-assisted propulsion, reducing frictional drag on ships through air lubrication, and the use of batteries – all of which can reduce

fuel consumption. “Combined, these can deliver substantial emissions reductions in the next few years and help kickstart shipping’s energy transition,” he added.

Aoife O’Leary, the founder and chief executive of Opportunity Green shares a similar view. Her company is a non-profit that uses legal, economic and policy knowledge to advise on climate issues.

Half of the shipping emissions alone, O’Leary says, can be reduced through operational changes such as regularly cleaning the hull, ensuring propeller efficiency, and optimising the speed of ships when travelling. Despite these solutions, policies remain rigid, with the shipping industry failing to factor emissions into existing operations and journeys.

“While the industry will say that fuel is one of their biggest costs, they fail to optimise their operations to reduce these costs,” she said.

More sustainable fuels such as methanol made from sources like waste biomass or from direct air capture, or renewable hydrogen, can achieve the same emission reductions without methane slip.

Scaling wider use, however, will require significant global investments in vessels and infrastructure.

“On the energy side, fuel production for shipping will draw on the limited production capacity of green hydrogen, ammonia, and methanol, all of which also have competing downstream applications,” added Spiliotis. “To access and expand green fuel capacity, the shipping sector needs to provide credible demand signals so that investments in green fuel plants are ramped up,” he said, noting that while the EU’s FuelEU Maritime and upcoming IMO equivalent will take the industry part of the way there, market barriers could still impede capital flow.

KEY POLICIES AND REGULATIONS

More stringent regulations will be

key to driving down shipping industry emissions.

Regional regulations such as the Emissions Trading System (ETS) – the EU’s flagship cap-and-trade scheme – have already extended coverage of carbon emissions from all large ships (of 5,000 gross tonnage and above) entering EU ports in January 2024.

The system, which covers emissions from voyages starting or ending outside the EU, as well as emissions between and within EU ports, will expand to cover methane in 2026 and penalise ships that use

signals some progress as it will tax the shipping sector and could potentially generate revenue to produce cleaner fuels.

“There has been a real push from climate-vulnerable countries in the IMO to have a levy on shipping with some of that revenue supporting those who are affected by the climate crisis.”

“The shipping industry must address climate change. Even if [the ETS] doesn’t engage shipping emissions, it should as a carbon price,” she said. The shipping industry will ultimately fail to decarbonise

On the energy side, fuel production for shipping will draw on the limited production capacity of green hydrogen, ammonia, and methanol, all of which also have competing downstream applications.

high-methane-slip engines and offer an economic incentive to reduce their emissions.

Spiliotis said the ETS is already helping to cut the price gap between heavy fuel oil and green fuels, such as biodiesel in Asian bunkering hubs like Singapore.

“By effectively raising fuel cost, it is, along with other IMO measures, also incentivising the adoption of energy efficiency, though with a limited effect,” he explained.

“The EU ETS in its current set up will not be able to significantly reduce shipping emissions, as buying allowances will generally be more economical for shipowners and operators than reducing fuel burn.”

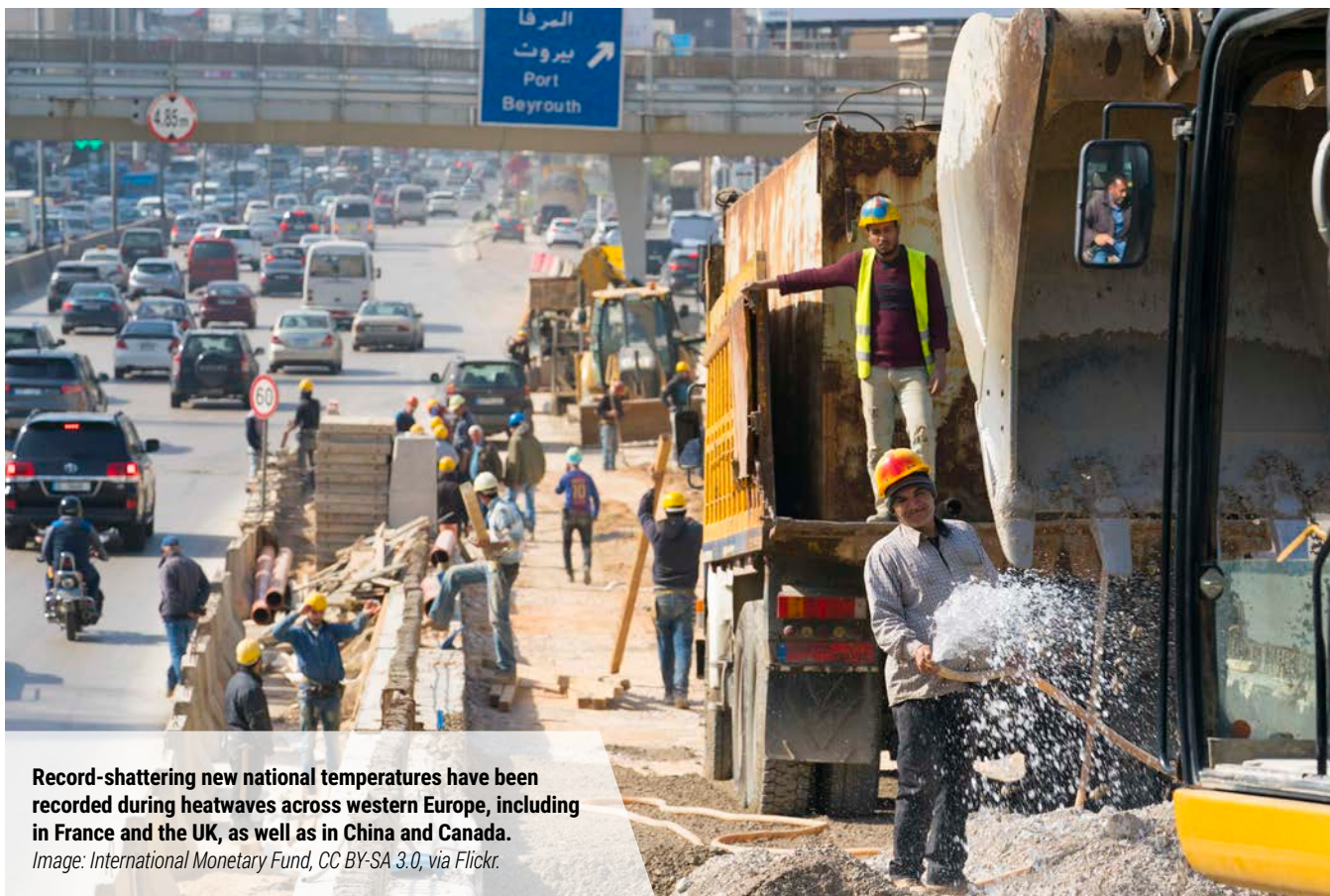
O’Leary agrees, noting that while no one policy is sufficient enough to decarbonise the shipping industry, the extended coverage of the ETS

without international regulations, concludes Comer, calling for quicker action from the IMO in developing effective policies.

While the IMO aims to achieve net zero GHG emissions by or around 2050 under its 2023 GHG Strategy, Comer adds, these goals are not legally binding – but the regulations that are developed to achieve these goals will be.

“It’s important that the IMO move swiftly, but it’s equally important that the IMO develops effective regulations that have reasonable assumptions for the baseline GHG emissions from ships. This is so that we don’t end up with only on-paper reductions in GHGs.”

(Source: <https://www.eco-business.com/news/methane-slip-from-lng-ships-jeopardising-net-zero-goals-in-maritime-sector/>)



Record-shattering new national temperatures have been recorded during heatwaves across western Europe, including in France and the UK, as well as in China and Canada.

Image: International Monetary Fund, CC BY-SA 3.0, via Flickr.

EXPLAINER: WHY IS CLIMATE CHANGE CAUSING 'RECORD-SHATTERING' EXTREME HEAT?

The small village of Lytton in British Columbia, Canada was once a pitstop for hikers and tourists taking in nearby scenic mountain ranges and rivers, states **Daisy Dunne**, Carbon Brief

But, in 2021, a devastating wildfire – fuelled by an unprecedented heat-wave sweeping much of the Pacific north-west – destroyed nearly all of its houses and buildings, killing two of its 250 residents.

Amid the disaster, temperatures in Lytton reached 49.6°C – the highest temperature ever recorded in Canada, smashing the previous record for the country by 4.6°C.

Climate scientists studying the heatwave were left stunned by the record-shattering temperatures.

“Within our knowledge, this [heat-wave] is basically impossible,” the late pioneering extreme weather scientist, Dr Geert Jan van Oldenborgh, told a press conference at the time. Since then, the Earth has experienced more “record-shattering” extremes.

In 2022, temperatures in the UK reached 40.3°C amid a scorching summer heatwave – 1.6°C above the previous record. A year later, the national record in China was blown by 1.9°C as temperatures hit 52.2°C. At the same time, leading climate scientists have been racing to understand why these events are happening, how they are linked to rapidly rising global temperatures and what this could mean for Earth’s future.

Below, Carbon Brief speaks to experts and assesses the latest scientific evidence to explore why climate change is causing record-shattering extreme heat across the world.

What is ‘record-shattering’ extreme heat?

In this era of rapid human-caused climate change, the setting of new regional and national temperature records during heatwaves happens so frequently that it can sometimes feel commonplace.

However, every so often, a record is broken by a large margin – often driving unprecedented impacts, as well as alarm about

what it might signify about the pace of climate change.

Researchers call this “record-shattering” or “record-smashing” heat, explains Prof Erich Fischer, a climate extremes scientist at ETH Zurich and a lead author of the most recent landmark assessment by the Intergovernmental Panel on Climate Change (IPCC). He tells Carbon Brief:

“I would define it as a class of record-breaking events in which the record breaks the previous one by a large margin.” What that margin is depends on the event in question, he says. For example, a new national temperature record that is a few tenths of a degree higher than the previous would not be considered record-shattering.

However, global average temperatures in 2023 were record-shattering – even though they were

only 0.14-0.17°C above the previous record in 2016.

This is because taking an average over a large area and timescale is more likely to minimise the influence of natural variability in the climate – making smaller upward trends more meaningful, Fischer explains:

“You would expect global temperature to increase rather smoothly, with some wiggles. It’s not like the temperature in our backyard, which goes crazy up and down.”

To quantify the size of record-shattering events at different timescales and in different geographic areas, scientists often use standard deviation. This is a measure of how spread out data is from the mean.

In what is known as a “normal distribution” of data, 68 per cent of the data points will fall within one standard deviation of the mean, 95 per cent will be within two standard deviations and 99.7 per cent will be within three standard deviations.

So, for a specific heatwave, scientists calculate how many standard deviations that event is away from the average climate for that location. A record-shattering extreme event will be multiple standard deviations beyond the average.

The last few years have seen a wide variety of record-shattering heat extremes.

Record-shattering new national temperatures have been recorded during heatwaves across western Europe, including in France and the UK, as well as in China and Canada.

The Pacific north-west heatwave in 2021, when Canada’s temperature record was smashed in Lytton, is among the largest record-shattering heatwaves ever recorded – although there have been a couple of events that were more extreme in terms of standard deviations, research finds.

That research paper found that the Pacific north-west heatwave broke temperature records by just over four standard deviations, while



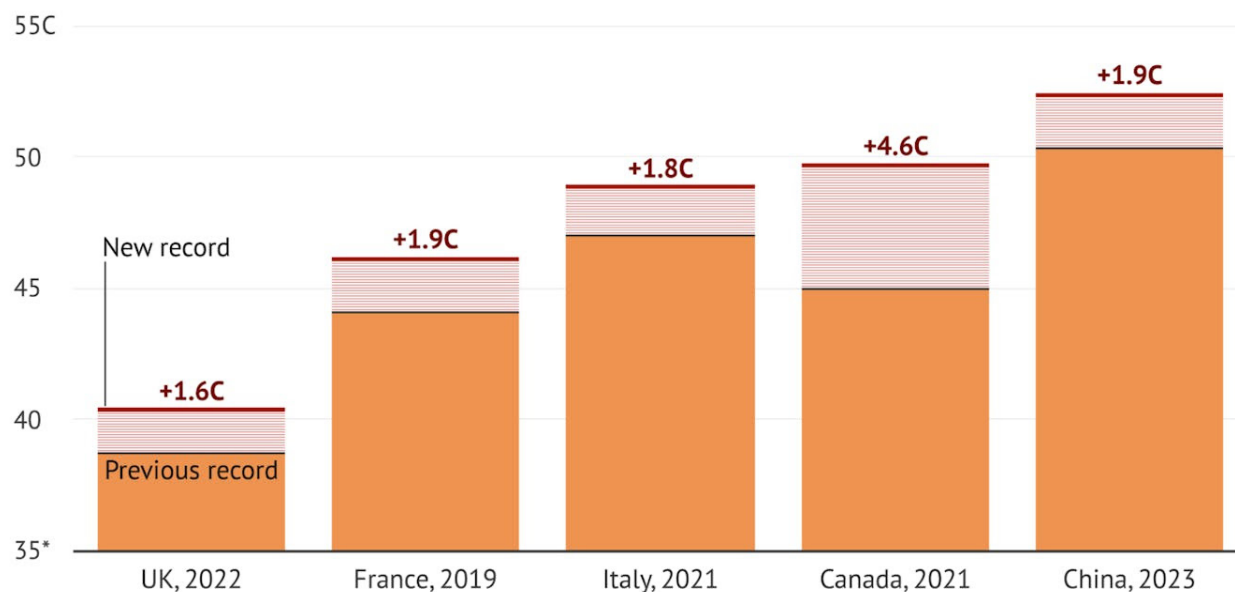
Very often we are adapting to what we just saw – or what we saw over our lifetime. But record-shattering events are unthinkable. If we stop warming [the planet], the probability of record-shattering events will very rapidly go back to zero. That will help a lot with adaptation.

– DR ROBERT VAUTARD

Senior Climate Scientist, National Centre for Scientific Research Institut Pierre-Simon Laplace

'Record-shattering' heat extremes are on the rise

National maximum temperature records that were broken by large margins over 2019-23, C



*Truncated axis

Source: World Weather Attribution and media reports

CarbonBrief
CLEAR ON CLIMATE

the most extreme heatwave ever recorded, in Southeast Asia in 1998, broke records by just over five standard deviations.

Other record-shattering heat events from recent years include a year-long marine heatwave in the north Atlantic Ocean beginning in March 2023, when sea surface temperatures were up to 5°C hotter than normal.

The event caused deadly heat stress to hit nearly all of the Atlantic's tropical reefs and contributed to a very active 2023 Atlantic hurricane season.

It is worth noting that understanding of such extremes is generally better for global-north countries than those in the global south.

Reasons for this include that temperature records in global-north countries are longer and more complete, plus there are more weather stations, too. Previous Carbon Brief

analysis found that Africa has the lowest density of weather stations out of any continent, followed by South America and Asia.

This means that scientists do not have a full understanding of the geographic distribution of record-shattering heat, says Dr Robert Vautard, a senior climate scientist at the National Centre for Scientific Research at Institut Pierre-Simon Laplace in Paris and co-chair of the climate science working group of the IPCC. He tells Carbon Brief:

"We don't know fully where record-shattering events are more expected than in other places...That is an area where I would expect progress in the coming years."

Why are heat records being shattered by huge margins?

In the aftermath of the 2021 heatwave in the Pacific north-west, scientists were left scratching their

heads about the kind of temperatures they were studying.

At the time, researchers at the World Weather Attribution service, a consortium of scientists studying the influence of climate change on extreme events, suggested that it might indicate the Earth had "crossed a non-linear threshold" – where even small increases in global temperature is causing much larger rises in extreme heat than scientists expected.

"It's an extraordinary event," van Oldenborgh, who co-founded the WWA, told a press conference, adding that it was "surprising and shaking" to find out that "our theoretical picture of how heatwaves would behave" in a warming climate "was broken" so dramatically.

Since then, several studies have looked into the possible causes of the extremes seen in the Pacific north-west heatwave and the occurrence

of record-shattering heat more broadly. The emerging consensus is that – while staggering and dangerous – these extremes are within the realms of what the world can expect as global temperatures continue to rise rapidly.

Vautard, who recently led a study in *Environmental Research Letters* looking into whether heat extremes are increasing in a way that is beyond what scientists anticipated, tells *Carbon Brief*:

“The study shows that this is really what we expect with climate change. There is not anything else that we don’t understand. It’s terrible, but we understand it.”

The reason why records are sometimes broken by large margins – rather than incremental increases – can be understood by considering the rapid rise in global temperatures, explains Fischer, who has also published papers looking into the phenomenon. He says:

“The rate of warming plays an important role. If you have, say, a one-in-50-year event – if it happens once and then reoccurs [on average] 50 years later, the climate in between has been warming very, very rapidly, so the difference in the magnitude of these two events is going to be much larger.”

In other words, every so often, a range of climate factors – both natural and human-caused – will combine to cause an extreme heat event.

Scientists use return periods to describe such events, with a larger return period indicating a more extreme event that is less likely to occur at any given time.

This was the case during the Pacific north-west heatwave, when a “blocking” weather pattern – a region of high pressure in the atmosphere – stalled over the region, creating a dome of unusually high temperatures. At the same time, temperatures were exacerbated further by the effect of dry soils.

Each time an event like this occurs, it is against a backdrop of human-caused climate change, which is making heatwaves more intense and more frequent.

As global temperatures continue to rise, their influence on extreme heat events gets larger and larger.

Therefore, when a very rare heat event combines with ever-increasing temperature rise, it can cause a record-shattering event, says Dr Clair Barnes, a climate statistician at Imperial College London, who was a co-author on the recent *Environmental Research Letters* study. She tells *Carbon Brief*:

“The heat extremes that we are seeing are not unexpected.”

How could record-shattering extreme heat increase in future?

In 2021, Fischer led a study published in *Nature Climate Change* that explored how record-shattering heat events could increase in future.

The research considered such events to be week-long heat extremes that break previous records by two, three or four standard deviations.

Events falling under the two standard deviations category include the 2003 European heatwave, which killed 30,000 people, and the 2010 Russian heatwave, which killed at least 5,000 people in Moscow.

The researchers looked at the probability of such events occurring under a range of future scenarios.

This included a future scenario where greenhouse gas emissions are extremely high (known as “RCP8.5”) and a scenario where global temperature rise is limited to below 2°C by 2100 (known as “RCP2.6”). (Limiting global warming to “well-below 2°C” is part of the long-term goal set by countries under the Paris Agreement.)

The research found that, under the scenario of very high greenhouse gas emissions, week-long heat

events that break records by three or more standard deviations will be come between two and seven times more likely in the period 2021-50 and three-to-21 times more likely in the period 2051-80, when compared to the past three decades.

Conversely, if the world can limit global warming to 2°C, which would involve stabilising the climate by reaching net-zero greenhouse gas emissions, the occurrence of record-shattering heat events will rapidly decrease, Fischer says:

“If you manage to stabilise the climate, record-shattering events would decrease. You would still see worrying heatwaves, but that record-shattering aspect would decline.”

This is because the rate of global temperature rise – the main driver of record-shattering extremes – would no longer be increasing.

Even slowing down the pace of global warming, by slashing global emissions, would reduce the probability of such events occurring, he adds:

“This is one of the few early benefits [of mitigating climate change]. I think it’s an important one, because usually we say we will only see benefits once we actually stabilise the climate, but here is one we will see even before we reach this.”

This is a clear example of where “mitigation can help out a lot with adaptation”, adds Vautard:

“Very often we are adapting to what we just saw – or what we saw over our lifetime. But record-shattering events are unthinkable.

“If we stop warming [the planet], the probability of record-shattering events will very rapidly go back to zero. That will help a lot with adaptation.” 🌱

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(Source: <https://www.eco-business.com/news/explainer-why-is-climate-change-causing-record-shattering-extreme-heat/>)

Landmark Circular Economy Initiative to Recycle 32,000 Tonnes of Plastic Waste and Reduce 15,000 Tonnes of CO2 Annually

Building a self-sustaining, at-scale, zero waste to landfill, circular economy model in plastics waste management with active community participation in ensuring effective waste segregation.



In a historic move towards sustainable waste management in India, Re Sustainability, Asia's leading integrated sustainability solutions provider and Sharp Ventures, the investment office of the Harsh Mariwala family, announced their collaboration to launch a pioneering Plastics Circularity Initiative in Hyderabad, Telangana, and Raipur, Chhattisgarh.

The goals of this initiative are twofold: to increase the supply of very high-quality recycled polyolefins for the FMCG industry and to create sustained environmental and social impact. Currently, the FMCG sector in India faces a critical challenge in sourcing high-quality recycled materials, which limits their ability to meet sustainability targets and reduce reliance on virgin

plastics. By capturing and processing 32,000 tonnes of waste and reducing 15,000 tonnes of CO2 emissions annually, this project aims to produce over 9,000 tonnes of superior recycled polymers each year, providing a reliable supply of these materials for various FMCG and other applications. Over the next five years, this initiative intends to evolve into a nationwide, large-scale recycled polymers enterprise, reducing environmental impact and setting a new standard for responsible waste management practices.

Hyderabad and Raipur have been strategically chosen for this initiative due to their unique demographics and waste management challenges. Hyderabad, as a major metropolitan city, generates a significant amount of plastic waste, making it an ideal

location to implement large-scale recycling processes and demonstrate the impact of advanced waste management technologies. Raipur, representing smaller urban centers, faces different but equally critical waste management issues. By implementing the project in both cities, the initiative can address diverse challenges, create scalable solutions, and set a replicable model for other cities across India.

This landmark circularity project will commence with the setup of infrastructure now in both cities, with facilities expected to be operational by early FY26. Setting up this infrastructure involves building advanced recycling facilities equipped to handle large volumes of waste efficiently. From 2026 onwards, high-quality recycled

polymer is likely to be available for purchase by the FMCG and other industries, providing a new revenue stream for the project. This infrastructure setup aims to achieve nearly 100% diversion of dry waste from landfills through comprehensive recycling processes.

Collaborative Effort: Sharrp Ventures, Re Sustainability, and Marico Innovation Foundation

Marico Innovation Foundation (MIF), subsidiary of Marico Limited, identifies and supports the scale up of disruptive Indian innovations with the potential to create long-lasting socio-economic and environmental impact in India. In 2022, MIF embarked on a mission to address plastic waste through its playbook “Innovation in Plastics: The Potential and Possibilities,” which highlighted the urgent need for a resilient circular economy in India. Further to the same, Re Sustainability and Sharrp Ventures have come together to launch Plastics Circularity Initiative, with MIF being the knowledge partner.

Re Sustainability, with over 30 years of experience in waste management across 11 countries, brings its extensive expertise and innovative approaches to this initiative. Their commitment to sustainable practices has positioned them as a global leader in the field, managing over 8 million tonnes of waste annually. Sharrp Ventures, the investment office of the Harsh Mariwala family, is involved by providing the necessary risk capital and strategic support, ensuring the initiative's scalability and success. Together, these entities are leveraging their collective expertise, resources, and innovative approaches to set new standards in sustainability through this project.

Social Impact

Beyond waste management, the initiative also aims to drive social

inclusion by providing direct jobs for over 370 people in the first phase of this initiative, with a projected 75% target of women in the workforce, and indirect livelihoods for 2,000 people. By involving local communities in effective waste segregation and recycling through various engagement programs, the initiative promotes active participation and responsibility at the grassroots level.

Closing the Circular Loop

The essence of this Circularity Initiative lies in creating a self-sustaining, at-scale, zero-waste-to-landfill, circular economy business model in the plastics waste management industry. The initiative includes 100% digital end-to-end traceability, ensuring transparency and accountability. It also aims to include citizens in creating an impact through sustained and effective segregation of waste at the household level in Hyderabad and Raipur. Furthermore, the project leverages indigenous and global technology innovations across the value chain of plastics waste management to ensure scalability in the future. One of the facilities in Hyderabad is intended to be a fully

automatic sorting facility, utilising advanced technologies such as AI-driven optical sorting provided by Ishitva Robotics Systems. This cutting-edge technology ensures precise sorting, significantly reduces manual labor, and sets a new standard for efficiency. The ultimate goal is to replicate this project in several Indian cities and the Global South, creating an even larger social, environmental, and economic impact.

Mr. Harsh Mariwala, Founder and Chairman - Marico Limited, said, “This initiative represents a significant step towards building a circular economy that benefits both the environment and society. By increasing the supply of high-quality recycled materials and creating sustainable waste management practices, we are setting a new standard for innovation and responsibility in the industry. Our goal is to inspire other regions to adopt these scalable models, fostering a more sustainable future for all.”

“This pioneering circularity initiative is a significant milestone in India's circular economy journey”, said Mr. Masood Mallick, MD and CEO of Re Sustainability Limited, “By leveraging state-of-the-art technology, together with social inclusion, we aim to tackle the challenge of increasing plastic waste and avoid recyclables from reaching landfills. There is untapped economic value, resource conservation, carbon abatement opportunity as well as pollution mitigation impact associated with every kilogram of waste we generate; harnessing this ‘value’ across all these dimensions by way of this initiative is a significant step towards achieving a more circular FMCG industry in India. By re-evaluating how we manage and repurpose waste, we can transform it into valuable resources, ignite innovation, and pave the way for a cleaner, more sustainable environment and a better future for generations to come” he added. 🌱

The essence of this Circularity Initiative lies in creating a self-sustaining, at-scale, zero-waste-to-landfill, circular economy business model in the plastics waste management industry.



How authorities address climate-related disasters such as landslides in Kerala in the coming years will be crucial for the entire country. Image: Rakesh Pai/Flickr

How unplanned development, unusual rain ended in disaster

The Kerala landslide underscores the importance of preserving human lives in the Western Ghats region amid the challenges of climate change, writes **Sajan Thomas**

The southern Indian state of Kerala is still recovering from the shock and ravages of its worst landslide in its history. The estimated death toll is 333 and around 281 people are missing.

Wayanad district, situated in the ecologically sensitive Western Ghats and renowned for its misty mountains and lush landscapes popular with tourists, is grappling with the severity of a disaster that, in the words of Chief Minister Pinarayi Vijayan, has “wiped out an entire

area”. The Chooralmala-Mundakkai region in Meppadi Panchayat, which was the worst hit, falls under the Ecologically Sensitive Zone 1 (ESZ1) identified by the Western Ghats Ecology Expert Panel led by ecologist Madhav Gadgil in 2011.

The Gadgil report had warned against anti-environmental activities in the area due to its unique geography and thick forest cover.

Chooralmala and Mundakkai are among the remote forest-adjointing areas in Wayanad, inhabited by tea plantation workers and farmers who

also run small businesses. A few houses are still standing in Chooralmala, but the landslide didn’t spare any human construction in Mundakkai. A couple of people survived by sheer luck.

It’s not the first time disaster has struck the region. In 2019, a major landslide in Puthumala, just a few kilometres away, claimed 17 lives, damaged property and rendered the land largely uncultivable.

The destruction of land and property this time has devastated the local economy. Unusually heavy rainfall, estimated to be around 1,830mm over the past 30 days, preceded the disaster.

Climate scientists have identified a connection between the Wayanad landslides and the heating up of the Arabian Sea, which leads to the formation of deep cloud systems.

This phenomenon is a consequence of global warming. The mountain ranges of the Western Ghats also block moisture-laden airflow, increasing the likelihood of localised extreme rainfall events in areas like Wayanad.

The cost of development

Development aspirations were high in the region due to its proximity to Kalladi, the entrance to the four-lane tunnel road project connecting Bengaluru with Kozhikode.

The tunnel, which is set to become the third-longest in India and is being built by the Konkan Rail Corporation Limited, has faced criticism from environmental groups for the risks it poses to both wildlife and the increased occurrence of floods and landslides. Tourism was thriving in the Chooralmala-Mundakkai areas following the “discovery” of “exotic” new locations and the increasing popularity of old favourites such as Soochipara Waterfalls.

Baby, a local farmer, said there has been a huge increase in the number of resorts and homestays over the past few years, many of

which are located in picturesque but landslide-prone hilly areas. This trend is similar to that of many new concrete houses built over the last decade, primarily funded by remittances from the Gulf countries.

The compound effect of unplanned development, deforestation, land use changes and heavy rainfall driven by global warming over a short timespan is understood to be the major cause of the recurring landslides. Following the latest landslide, more than 150 tourists were stranded in multiple resorts as debris blocked all the roads connecting them.

Thousands of landslide survivors have been accommodated in schools around the nearby town of Meppadi. One school teacher volunteering in a relief camp remarked that there was no shortage of food or clothes as aid from other districts and neighbouring states was generously pouring in. However, there was constant screaming and utter confusion over identifying victims. The people in the relief camps have to search for their loved ones among the unidentified and distorted corpses or body parts recovered from deep inside the mud or from the Chaliyar river, kilometres away from Chooralmala-Mundakkai region.

Psychological impact of climate disaster

The people of Wayanad are predominantly religious, and performing death rituals according to their respective faiths is an integral part of social life.

The places of worship for the three major religions — Hinduism, Christianity and Islam — have been destroyed during landslides.

A massive loss of human life in a limited area and the inability to perform death rituals are not part of the personal experiences and social memory of Keralites.

Research shows that natural disasters have a significant psycho-

logical impact on survivors. It is promising that this realisation was immediate at the ministerial level in Kerala following the tragedy.

“Much more than the physical injuries, what affected the survivors the most was the mental trauma caused by the death of their loved ones overnight, said State Minister VN Vasavan, who was part of a high-level team that visited the hospitals with Wayanad residents who survived the tragedy with injuries.

“Many of them were in a state of absolute despair following the loss of those close to them, who were sleeping in the next room. Once the medical treatment is over, they need to be shifted for psychological counselling.” However, the mental health infrastructure is inadequate for providing long-term psychological support, with even the major mental health centres in Kerala lacking the facilities required by the Mental Healthcare Act.

Even though there is a government-run scheme to appoint a trained psychologist in every school, a shortage of funds has affected its proper functioning.

The new climate refugees

It is becoming increasingly common for high-risk, landslide-prone regions in the Western Ghats to experience extreme rainfall in a short span of time. For instance, Mundakkai recorded an alarmingly high 572mm of rain in just 48 hours before the disaster.

The Wayanad disaster has significantly increased the number of people in Kerala who have been forced to leave their homes due to climate change, commonly referred to as climate refugees.

A new category of “temporary” climate refugees is emerging, as it has become common for people living in landslide-prone areas of the Western Ghats to shift to their relatives’ houses, often unwillingly, during periods of extreme rainfall.

The majority of people living in relief camps in Meppadi have no idea where to go or what to do in the future. They only know that they need to move out of the schools soon so their children can continue their studies. Following the Puthumala and Kavalappara landslides in 2019, despite substantial delays, the Kerala government initiated special schemes to relocate and rehabilitate the survivors with support from private players.

However, if a mega disaster like the one in Wayanad was to unleash thousands of climate refugees, the Kerala government, which is already struggling economically, would not be able to accommodate them all.

Finding suitable land in nearby localities is another major challenge. In most cases, the survivors, who were dependent on the local economy and lived in close-knit neighbourhoods or kinship communities before the disaster, are resistant to relocating to distant places. The Chooralmala-Mundakkai landslide is a defining moment for conserving the Western Ghats, which span six states in India, as it underscores the importance of preserving human lives in the region amid the challenges of climate change.

How Kerala, globally acclaimed for its development indicators and widely regarded as a ‘model state’, addresses climate disasters in the coming years will be crucial for the entire country. ■

Sajan Thomas is a novelist and columnist who teaches Political Science at St. John's College, Anchal, which is affiliated with the University of Kerala. He holds a doctoral degree from the University of Bergen, Norway, and his other accomplishments include a fellowship from Harvard University and being a visiting scholar at NIAS, Copenhagen.

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(Source: <https://www.eco-business.com/opinion/how-unplanned-development-unusual-rain-ended-in-disaster/>)



Climate change has made weather as a result of La Niña more extreme, and this may increase risks of flooding, especially in low-lying agricultural zones.

Image: www.tiket2.com, CC BY-SA 2.0

LA NIÑA: BOON OR BANE FOR SOUTHEAST ASIA'S FOOD SECURITY?

The expected advent of the La Niña might portend a double-edged sword for affected regions, writes **Elyssa Kaur Ludher**

At least one Southeast Asian nation – Thailand – has declared the arrival of La Niña in early August. Others suggest a 70 per cent chance of La Niña conditions between August and October 2024. Generally, crop-producing countries welcome the advent of La Niña (“little girl”), but given some negative impacts, the phenomenon is usually a double-edged sword.

La Niña is welcome after the heat waves and drought brought by the 2023–2024 El Niño, which was recorded as one of the five strongest on record. It impacted agriculture, particularly rice production, in Southeast Asia. El Niño was declared to have ended by May 2024. Unlike El Niño, La Niña is typically associated with cooler and wetter weather that could bring favourable growing conditions for crops. La Niña usually succeeds an El Niño (especially if the latter is considered strong), but not always.

The La Niña phenomenon is characterised by unusually low temperatures. It typically occurs every 3–5 years or so, and is due to the periodic cooling of sea-surface temperatures across the east-central equatorial Pacific Ocean. It can also occur over successive years and last six to 24 months.

La Niña’s impacts are nearly the opposite of El Niño’s. It can intensify rain and heat patterns compared to when the El Niño–Southern Oscillation (ENSO) is in the neutral phase. Some climate authorities are cautious; Indonesia’s, the Philippines’, Vietnam’s and Malaysia’s state weather bureaus are monitoring potential storms and flood risks which are projected to start in August, and in the case of the Philippines, increased tropical cyclone occurrence.

Climate agencies caution, however, that as sea surface temperatures reach record-breaking levels

in 2023–2024 under the influence of climate change, there is a departure from historical global patterns of heat transfers associated with ENSO. It is thus challenging to predict how this anomalistic increase in global sea surface temperatures may affect future La Niña and El Niño events. Research has shown, however, that the two events have become more frequent and extreme due to climate change.

Historically, La Niña has resulted in increased rainfall in parts of Southeast Asia, particularly in the Philippines, Indonesia and Malaysia (see Figure 1). Many of the region’s maritime countries experience more rain from September to November and again from March to May. However, rainfall is reduced in the Philippines and Indochina between June and August.

Additional precipitation coinciding with planting seasons may

improve soil moisture, thereby benefiting crops, but higher-than-average rainfall and wind systems may result in floods or more destructive typhoons. Depending on the stage of the agriculture production cycle, this could result in loss of fertile topsoil/ fertiliser, seeds being washed away, landslides, poorer-quality crops, crop destruction, or livestock mortality.

Based on historical records, the main rice-producing countries – Indonesia, Vietnam, and Thailand – have often benefited from higher rice production during “strong” La Niña years (see Figure 2).

Put Up Your Umbrella

Figure 1: Typical rainfall changes in Southeast Asia based on limited historical La Niña occurrences (between 1979 and 2021) for Sep–Nov, Dec–Feb, Mar–May and Jun–Aug.

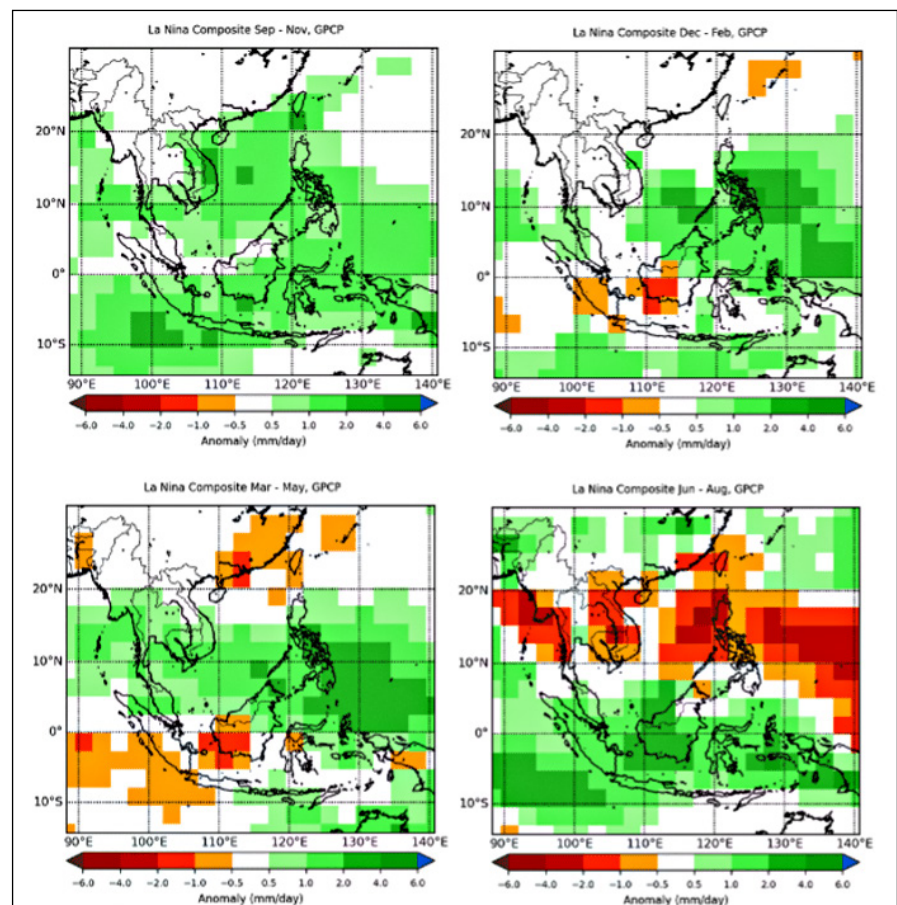


Figure 1. Source: Meteorological Services Singapore

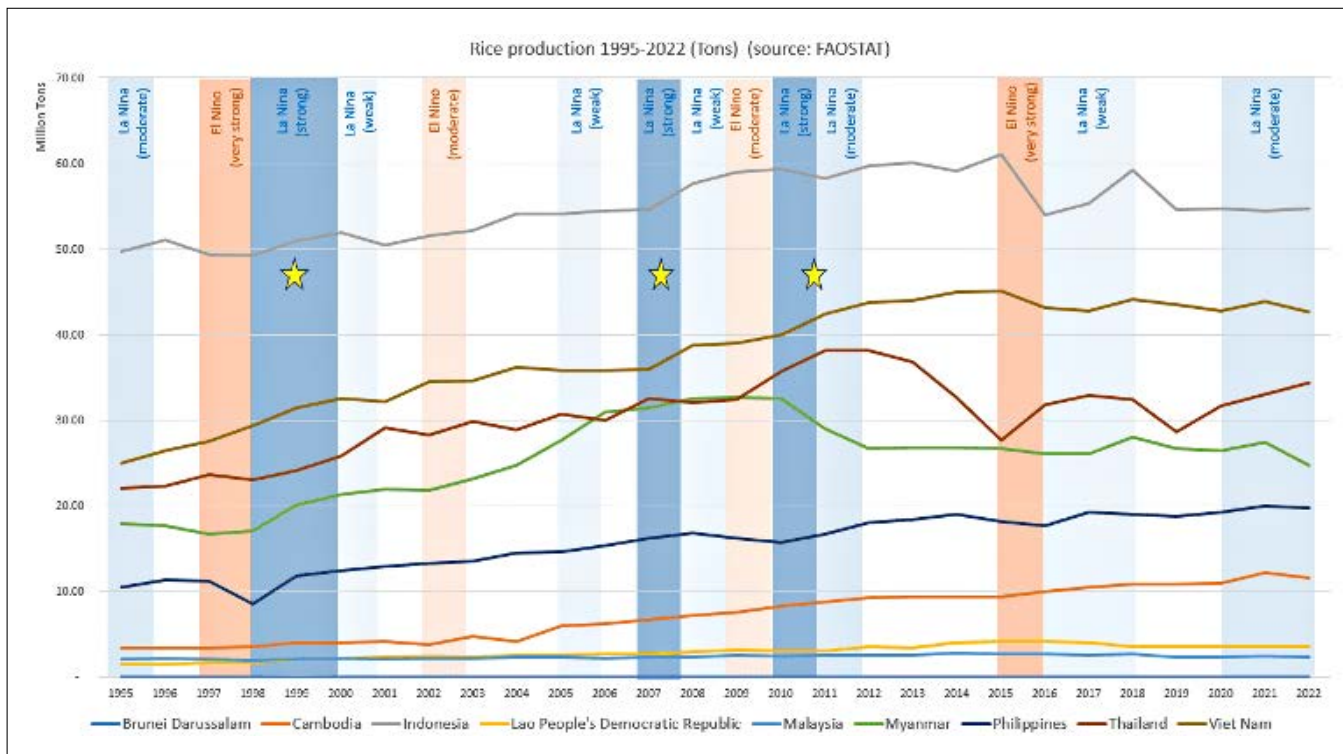


Figure 2. Source: FAOSTat, GGweather

Note: 2020–2021 is an anomaly due to Covid-19-related production impacts.

Bigger Rice Harvests (Usually)

Figure 2: Rice Production (in million metric tonnes) between 1995 and 2022 overlaid with La Niña and El Niño periods in Southeast Asian nations, with stars indicating years where production increased.

Notably, locations impacted by last year's strong El Niño may have experienced detrimental environmental, social and eco-

nomic effects. This is likely to affect the productivity of subsequent planting seasons. For example, soils compacted due to heatwaves and drought in 2023–2024 may have limited capacity to absorb rainfall, leading to higher runoff and causing floods. Farmers already reeling from economic losses due to low yield may find it challenging to afford sufficient seeds and other inputs for the next crop cycle. This could curtail

the abilities of farmers to maximise the dividends from La Niña.

La Niña typically has an impact on the global supply of staple grains, as it brings dry conditions and low yields to Argentina (affecting corn, wheat, and soybean) and Brazil (affecting corn and wheat). Both countries are major affordable grain exporters. Sometimes, however, this decline can be offset by agriculture gains in China, India, Australia and

While La Niña typically leads to above-average precipitation in parts of Southeast Asia and is often a boon to agriculture, this is not a guaranteed trend. Climate change has shifted ENSO dynamics; its impact on La Niña – and future El Niños – is yet unknown. One thing known is that climate change has made weather as a result of La Niña more extreme, and this may increase risks of flooding, especially in low-lying agricultural zones.

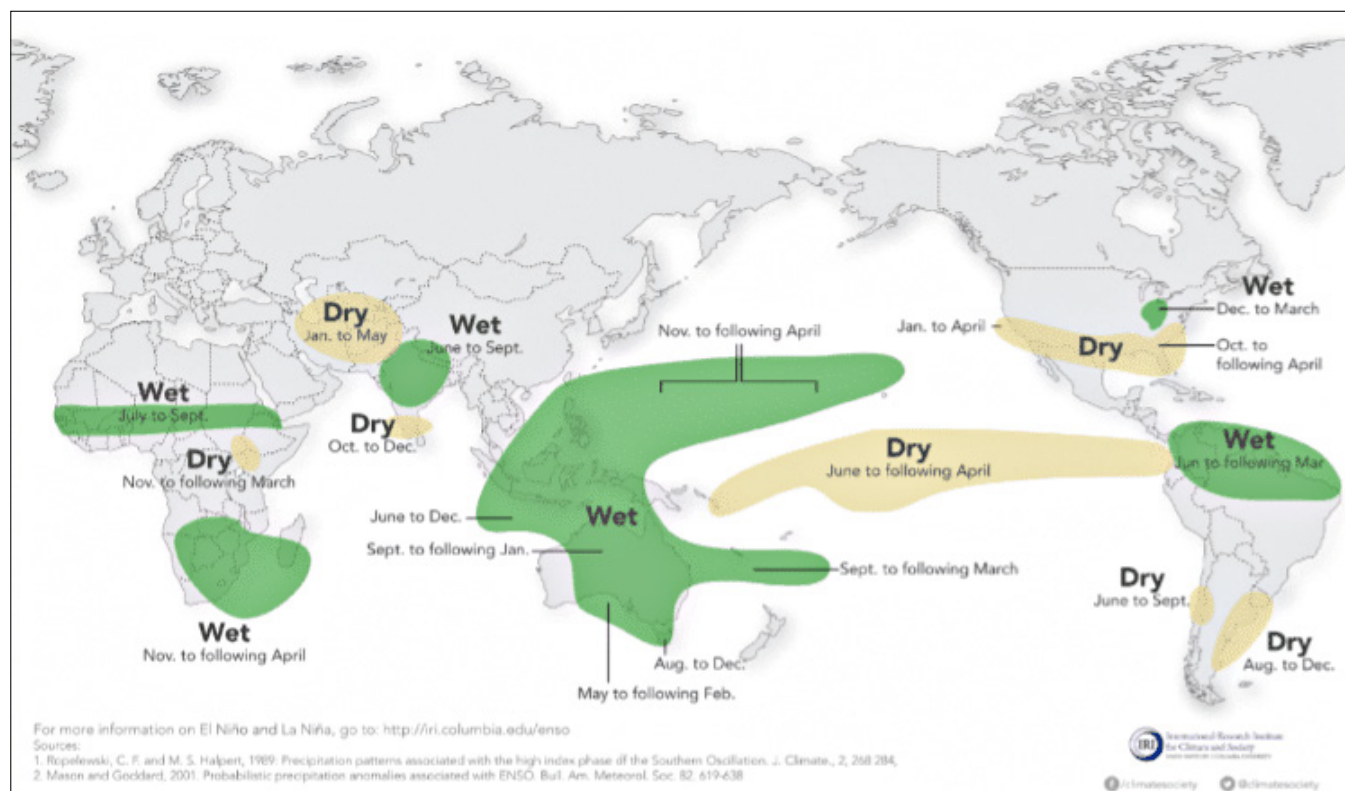


Figure 3. Source: International Research Institute for Climate and Society

parts of North America as a result of beneficial weather (see Figure 3), though the timing and strength of precipitation matters. Flooding during harvest periods could result in lower yields.

Southeast Asia is a large and fast-growing importer of cereals and oilseeds. Indonesia is among the world's top three wheat importers, and the Philippines is among the top ten. Many Southeast Asian countries are net importers of corn (Figure 4). Malaysia and Vietnam import approximately 100 per cent and 75 per cent of their corn, respectively. Southeast Asia's wheat and corn supplies are mainly from Argentina and Brazil. Wheat is used for food and feed, while most corn is used for feed. Any global supply shortage would increase the price of meat in Southeast Asia. It would also impact food trade. For example, Vietnam is the third largest seafood exporter in the world, more than half of which

is farmed fish and shrimp which depend on imported feed.

Wet Dry Wet

Figure 3: Net wet and dry regions and timing globally as a result of La Niña

While La Niña typically leads to above-average precipitation in parts of Southeast Asia and is often a boon to agriculture, this is not a guaranteed trend. Climate change has shifted ENSO dynamics; its impact on La Niña – and future El Niños – is yet unknown. One thing known is that climate change has made weather as a result of La Niña more extreme, and this may increase risks of flooding, especially in low-lying agricultural zones. If rainfall coincides with sensitive periods in the crop cycle, La Niña could also result in substantial damage to mature crops and worsen pest and disease outbreaks.

Boon or bane, Southeast Asian nations should be proactive to

mitigate risks and capture potential benefits. Rather than just being glad that water reservoirs may be refilled, governments should assist farmers to recover from last year's El Niño-related challenges quickly – with extension (farmer assistance) services and favourable credit for inputs – so that they are ready to maximise gains should they eventuate. Furthermore, policymakers should also prepare for potential meat price inflation and trade disruptions due to grain yield decline in La Niña-impacted regions in Latin America. Over the longer term, policymakers will also need to invest in improving R&D for climate-resilient crops, ensuring the long-term sustainability and resilience of food in the region. ■

This article was first published in *Fulcrum*, ISEAS – Yusof Ishak Institute's blogsite.

(Source: <https://www.eco-business.com/opinion/la-nina-boon-or-bane-for-south-east-asias-food-security/>)



Although listed as vulnerable in the IUCN Red List of Threatened Species, there are around 718 snow leopards in India, of which 477 are in Ladakh. Image: Matt Hance, CC BY-SA 3.0, via Flickr.

CLEARING THE AIR ON SNOW LEOPARDS AND LAST CHANCE TOURISM

India's Ladakh is seeing a form of tourism which relies on climate grief and a desire to escape toxic cities, writes **Padma Rigzin** and **Vasundhara Bhojvaid**

He had come all the way from France to the barren Himalayan heights of Ladakh at the edge of Tibet to see the elusive snow leopard, but the tourist was sad. "This animal, the snow leopard, is not the one who makes climate change, but it has to bear the consequences," he said.

In Ladakh's booming tourism sector, snow leopard tourism has emerged as an important niche. Tourists, mainly from rich western Europe, North America, Australia and New Zealand, arrive in packaged tours of a week to a fortnight, and bed down in homestays, guest houses, luxury camps or lavish wildlife lodges.

These tourists are acutely aware of the effects of climate change. To them, snow leopards are not just elusive big cats, but also victims of the changing climate. These people visit Ladakh with an undercurrent of grief that innocent animals must bear the consequences of humanity's mistakes. There's a word for the emotion they seem to be

experiencing: solastalgia. Australian environmental philosopher Glenn Albrecht coined the term to describe the homesickness one feels when still at home, while all around, their home environment is being destroyed in ways they cannot control.

The distress solastalgia tries to capture has many layers. It can be tied to the immediate impacts of floods, hurricanes or fires. It also refers to slower changes – the grief experienced when plants and animals disappear and landscapes change.

Last chance tourism signifies the rush to see animals such as polar bears before they vanish due to the warming planet. Ironically, tourists require energy-intensive modes of transport to reach the Arctic, thereby contributing to greenhouse gas emissions.

Call of the wild

With 2024 on track to be the hottest year on record, it is hard to deny we live in a vastly changing planetary system marked by extreme weather patterns that are affecting our lives in insurmountable ways.

In the context of climate change and growing urbanism, snow leopard tourism represents a return to “wild” rural Ladakh.

This embodies the grief in coming to terms with not only what is lost, but humanity’s role in the process. This grief is also laced with hope in that some patches of wildness remain which are experienced through immersion in the stunning landscapes of Ladakh while hoping to see a snow leopard.

Since such tourists typically come from affluent urban backgrounds, their fast-paced industrialised lives come to represent a death of the natural world for them, bereft of any untouched wilds. In contrast, rural Ladakh, with barren mountains and lush

valleys, and wild animals, becomes a symbol of pristine wilderness.

Escaping Delhi’s toxic air

Ten years ago, Delhi earned the unwanted title of world’s most polluted city.

In the past decade the rush of Delhi residents leaving the city in October-November – when the city’s air pollution tends to reach its annual peak – for a pollution or smog break has accelerated. These “pollution refugees” represent a small but growing contingent, although the majority of residents have no way out of their suffocating lives.

What makes the act of visiting better climes during Delhi’s most smog-laden months novel is that it encodes not just an escape but a nostalgia for one’s home and a loss resulting from the state of the air in the city. A closer look at the trend reveals deep colonial roots that inform postcolonial responses.

In the 18th century, medical topography, which is the study of the relationship between disease and living at places that were significantly elevated above sea levels, was well-established. It led to the development of hill stations during India’s colonial rule.

After independence this logic was carried forth by Indian elites. Since May 2014, when the World Health Organisation released the database detailing annual averages of pollution levels in cities, this trend of leaving Delhi on account of toxic air has progressively risen.

Paradoxes in grieving the loss of nature

There is an inescapable paradox about rich foreigners on long haul flights coming to Ladakh to see the snow leopard or well-off Indians travelling from different parts of the country to escape air pollution in the cities in fossil fuel-powered, energy-intensive modes of transport.

It is a paradox often ignored.

Not just the means of transport, but the service industry that caters to the comfortable living of these tourists, often in ecologically sensitive and remote locations, are highly energy intensive. They have to be, to provide food and comforts mostly sourced from global supply chains rather than whatever is locally available.

The carbon footprint of tourism is large. Both last-chance tourism and fleeing air pollution represent individual responses to the loss of nature that evade the question of effects on others. In Ladakh, while locals are finding new means of livelihood with the boom in tourism, their natural habitat is facing the brunt of these changes.

In Delhi the poorest that cannot afford to leave the city and have often come there in search of work must bear the increased medical bills from air pollution related illnesses and how that impacts their ability to work.

Homes of the rich in Delhi now are typically equipped with air purifiers, which have seen a boom in sales. The loss of a healthy natural world affects everyone.

The experience of solastalgia is spreading. To respond to this new form of grief in constructive ways we need to realise that human-environment relations are intrinsically connected. Our responses affect not just other humans, but all living species on Earth. 🌱

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(Source: <https://www.eco-business.com/opinion/clearing-the-air-on-snow-leopards-and-last-chance-tourism/>)



Focusing on nature-based solutions, such as through the strategic use of mangroves as a carbon sequester, could potentially provide 37 per cent of the emissions reductions needed until 2030 to achieve the targets of the Paris Agreement. *Photo: Timothy K via Unsplash*

CARBON CREDITS A 'CATALYST' FOR CLIMATE ACTION, NOT JUST A METHOD TO OFFSET EMISSIONS: ECOSECURITIES CHIEF

Carbon financing, be it through nature or technology-based solutions, will be key to near and long-term decarbonisation in Asia. With the region's emissions trading systems seeing some progress, regulation is still crucial to momentum and expansion, writes **Jeremy Chan**

For Asia to meet both near and long-term decarbonisation goals, nature-based solutions (NbS) and the carbon credits generated from low-carbon projects and technologies must be part of the picture.

With the region responsible for over half of all global carbon emissions yet home to some of the most significant natural resources on the planet, focusing on NbS could potentially provide 37 per cent of the emissions reductions needed until 2030 to achieve the targets of the Paris Agreement.

NbS refers to actions that protect, manage, and restore natural or modified ecosystems, benefitting society and biodiversity.

The method has gained considerable recognition in recent years as an effective way of sequestering emissions, with the 2023 Intergovernmental Panel on Climate Change (IPCC) report emphasising the protection of natural areas as one of the most effective strategies to reduce global greenhouse gas emissions.

“From a medium to long-term perspective, forest conservation, forest and mangrove restoration, and regenerative agriculture, are vital in achieving cost-effective reductions in greenhouse gas emissions, which are necessary for reaching net zero targets,” notes Pablo Fernandez, chief executive officer of ecosecurities, an environmental services provider.

Asia’s rich biodiversity also makes NbS a viable solution. Covering 30 per cent of the planet’s land area, the region is home to 500 million hectares of tropical forest, 25 million hectares of peatland, and the highest blue carbon content globally, which is the carbon captured and stored by coastal and marine ecosystems.

Since NbS projects sequester carbon or avoid emissions, these can be quantified and converted into carbon credits and traded on carbon markets, which can finance the

protection of ecosystems and natural resources, and generate funding for other low-carbon tools and solutions.

Leveraging carbon markets

The region’s NbS potential may explain why Asia’s carbon markets and related emissions trading systems (ETS) – which cap total emissions and allow companies to buy and sell emission allowances – have made some progress in recent years.

That, combined with a stronger regulatory push for climate action, increased investor interest, and growing voluntary and compliance carbon markets, has led to some developments in the region.

Countries such as China, Indonesia, Japan, Singapore, and South Korea already have an ETS in place. South Korea has made marked headway in particular, with its ETS being the second-largest emissions trading scheme in scale, covering close to three-quarters of its national greenhouse gas emissions. Progress, however, remains fragmented with

some countries – such as India, Malaysia, Vietnam, and Thailand – still developing an ETS. Other nations, such as the Philippines, have yet to announce one.

Despite patchy developments in the region and a slowly growing number of companies with net zero goals, Asia appears to be moving in the right direction with its carbon markets, fuelling hopes of stoking increasing global demand for carbon credits: the voluntary carbon market was valued at US\$2 billion in 2021 and projected to reach up to US\$50 billion by 2030.

This, in turn, will present opportunities for companies that specialise in climate mitigation projects and ones that can potentially generate carbon credits.

One of these companies is ecosecurities, which operates in both compliance and voluntary carbon markets, and works with clients to source, develop and finance climate mitigation projects, such as those in renewable energy and NbS.

While the company aims to expand its reach within countries such as Japan and South Korea in light of more advanced ETSS, it hopes to tap into solutions beyond NbS with the hope of using advanced carbon-absorbing tools to reduce emissions and generate credits.

“Several Asia Pacific countries are implementing or developing carbon pricing mechanisms. But to meet the Paris Agreement goals, these efforts must accelerate and broaden to include sectors such as land use [emissions], the [heavy] industry, and the buildings sector,” Fernandez explains.

Ensuring credibility

To meet the increasing demand for carbon credits, projects that generate such credits must be credible.

For instance, a credible project must provide carbon reductions that would not have occurred without the carbon credit funding; ensure



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– PABLO FERNANDEZ

permanence by leading to long-term emissions reductions; must be verifiable by third parties; and align with recognised standards. This is in light of recent controversies that have shone the spotlight on carbon credits and raised questions about their legitimacy.

Fernandez is cognisant of this, noting that the company takes steps to certify the authenticity of the credits its projects generate. “Through extensive monitoring, reporting, and verification systems that often use technology, combined with ‘boots on the ground’ verification, we ensure projects are performing as expected. This helps us to transparently and accurately track our carbon reductions or removals,” he said.

Companies should responsibly view carbon credits as a “catalyst” for climate action, Fernandez adds, and not merely as a mechanism to offset emissions. This is because carbon credits generate revenue that can be reinvested into projects aimed at reducing emissions, such as renewable energy, energy efficiency, and reforestation projects.

“Carbon credits can help accelerate the transition to low carbon pathways, providing the vital finance that sectors need to scale up their decarbonisation activities,” he says.

“Our approach emphasises a ‘reduce and invest’ strategy. We encourage companies to integrate carbon credits and investments in projects as part of a broader, long-term net zero or sustainability strategy in alignment with the Science Based Targets initiative.”

A new kind of carbon credit?

Beyond emissions reductions and credits generated from restoring land, there are hopes that another method, dubbed “technology-based solutions (TbS)”, can also create carbon credits from emissions removed from the atmosphere.

This would, for example, see solutions such as carbon capture and

storage (CCS) technology used to trap emissions from industrial processes and then storing them underground.

Other forms of TbS include direct air capture (DAC) tools, which capture carbon directly from the ambient air using chemical processes, or “bioenergy storage” via biochar, which is a form of charcoal that can potentially store carbon for longer periods when added to soil. Another is “enhanced weathering”, or when carbon dioxide is removed from the atmosphere by speeding up the natural weathering process of rock. These approaches currently boast longer carbon storage durations, from 100 to 1,000 years but are also more expensive to develop, which may lead to higher carbon credit prices.

TbS currently represents a small fraction of the carbon credit market, but Fernandez notes that there is potential for much growth and emissions cuts this decade, especially if used in tandem with NbS. He adds that ecosecurities aims to expand its focus on TbS because of its near and long-term carbon capture potential.

“From a 2030 perspective, certain types of NbS, energy transition-related solutions, and TbS can be particularly helpful in delivering rapid cuts in greenhouse gas emissions,” he said.

While TbS could potentially benefit carbon-intensive economies the most, such as those in engineering, manufacturing, and technology-based industries, many will require financing in light of high costs – an issue the company aims to address.

“Innovations such as CCS and DAC often have high abatement costs, sometimes ranging from US\$400 to US\$500 per tonne of CO₂. Our focus is on using our local, regional, and international networks to accelerate the deployment of new decarbonisation technologies, aiming to flatten the cost curve and make these solutions more accessible to corporations looking to inset or offset emis-

sions within their value chains.” In a bid to expand into TbS, ecosecurities announced a partnership with SK Group in December 2023 – a South Korean conglomerate that operates across sectors including energy, semiconductors, telecommunications, and life sciences. The collaboration is the conglomerate’s largest investment into the carbon market and will allow ecosecurities to access SK Group’s carbon reduction solutions and technologies.

“By providing incentives and support to companies with innovative solutions, we aim to catalyse the emergence of technology-based carbon reduction initiatives,” said Moohwan Kim, executive vice president of SK Inc., adding that the expansion of technology-based solutions could generate carbon credits and, in turn, also grow the voluntary carbon credit market.

“Our short-term goals are to connect potential climate investors from Singapore, Japan and South Korea with high-impact carbon project development opportunities in host countries,” Fernandez added.

While NbS and TbS may provide some impetus for near- and long-term decarbonisation within Asia, governments must create favourable conditions for carbon markets to function effectively and grow, concludes Fernandez.

“This means strong demand signals from companies, as well as national, regional and international ETs, clear policy frameworks and rules of engagement,” he says.

“Without these, the market is likely to remain fragmented and regionalised, and the catalysing potential of carbon finance in supporting a low carbon transition globally and in the APAC region will be limited.” ■

(Source: <https://www.eco-business.com/news/carbon-credits-a-catalyst-for-climate-action-not-just-a-method-to-offset-emissions-ecosecurities-chief/>)

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