CSR TODAY

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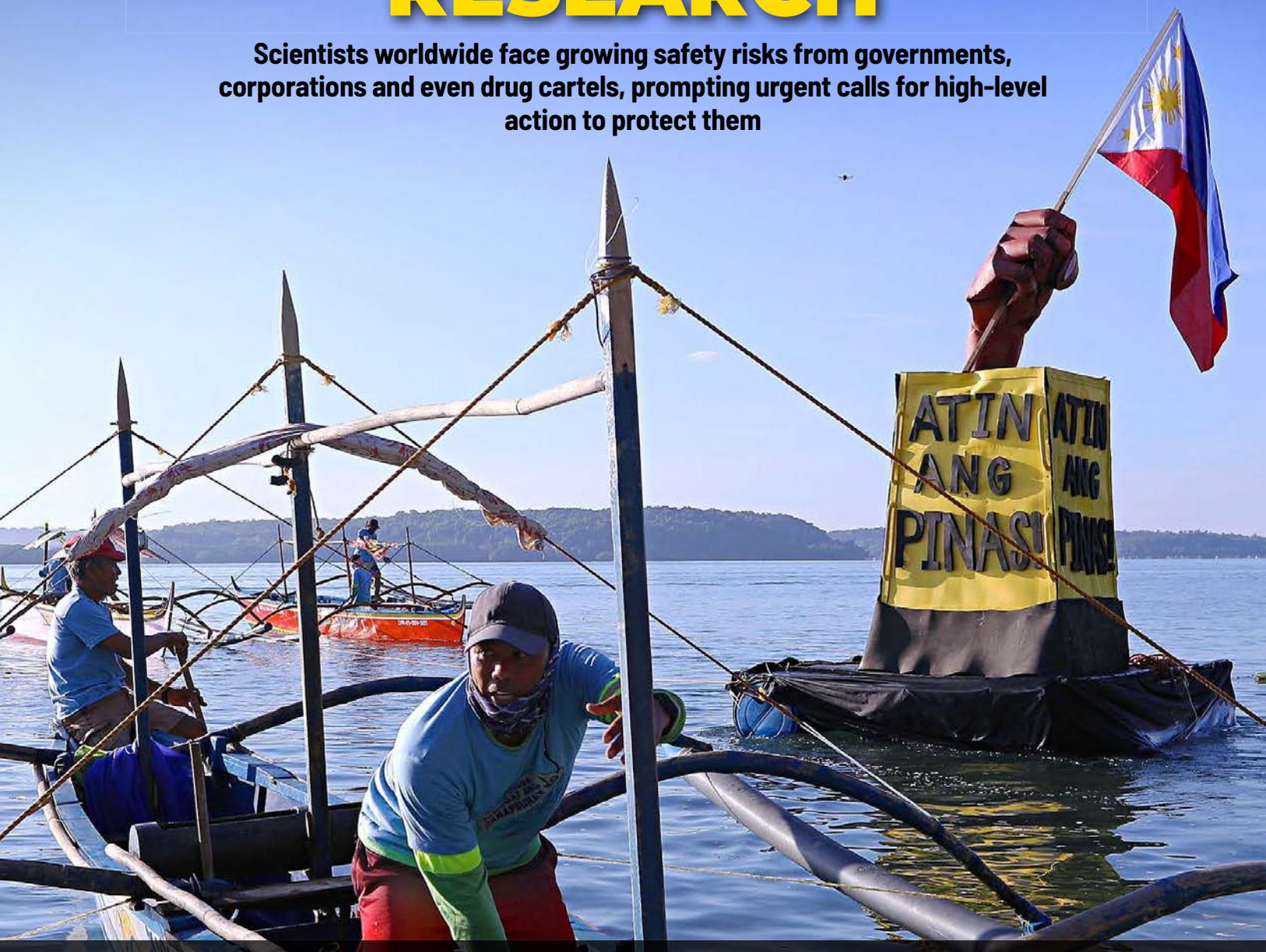
THE SCIENTISTS WHO RISK IT ALL FOR RESEARCH

Scientists worldwide face growing safety risks from governments, corporations and even drug cartels, prompting urgent calls for high-level action to protect them



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WHO launches US$ 1.5 billion Health Emergency Appeal to tackle unprecedented global health crises

Rajesh Tiwari
Publisher
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With the support of donors and partners, WHO aims to fulfill its unique role in health emergencies, while upholding the principles of international humanitarian law, ensuring that no one is left behind even in the most challenging circumstances.

Conflict, climate change, epidemics, and displacement are converging to create an unparalleled global health crisis, with 305 million people in urgent need of humanitarian assistance in 2025. In response, the World Health Organization (WHO) is calling for US$ 1.5 billion for its 2025 Health Emergency Appeal (HEA), to support life-saving health interventions worldwide.

The appeal, launched today by WHO Director-General, Dr Tedros Adhanom Ghebreyesus, outlines the critical priorities and resources needed to address 42 ongoing health emergencies, including 17 Grade 3 crises – the most severe emergencies requiring the highest level of response. With health systems stretched to their limits and global financial resources dwindling, the US$ 1.5 billion are needed to help people facing the most difficult situations

"Conflicts, outbreaks, climate-related disasters and other health emergencies are no longer isolated or occasional – they are relentless, overlapping and intensifying," said Dr Tedros Adhanom Ghebreyesus, WHO Director-General. "From controlling cholera outbreaks to providing mental health support in conflict zones, WHO's work extends beyond the immediate care we provide. We empower communities to protect themselves, prioritize equity, and build a legacy of preparedness. This appeal is about enabling WHO to save lives, protect the right to health, and provide hope where there is none."

WHO is committed to delivering emergency health assistance, including in conflict zones such as the Democratic Republic of the Congo, the occupied Palestinian territory and Sudan. WHO's response in emergencies is aligned with wider humanitarian efforts and prioritizes providing essential care and medical supplies; treating malnutrition and supporting maternal and child health; conducting vaccination campaigns to prevent disease outbreaks; and offering mental health support to populations impacted by trauma.

The Appeal highlights four key challenges facing the world currently: climate change, conflict, displacement and disease outbreaks. These are responsible for fueling deeper, longer lasting health crises and putting the world's most vulnerable at greater risk.

The appeal further details the priorities and financial needs for each of the Grade 3 emergencies that WHO is responding to.

With the support of donors and partners, WHO aims to fulfill its unique role in health emergencies, while upholding the principles of international humanitarian law, ensuring that no one is left behind even in the most challenging circumstances.

This appeal is about more than just funding – it is a call to action. As crises grow more frequent and severe, the gap between global needs and available resources continues to widen. Supporting WHO's Health Emergency Appeal is a vital investment in global solidarity and health equity.

The United States was a founding member of WHO in 1948 and has participated in shaping and governing WHO's work ever since, alongside 193 other Member States, including through its active participation in the World Health Assembly and Executive Board. For over seven decades, WHO and the USA have saved countless lives and protected Americans and all people from health threats. Together, the US and WHO and others ended smallpox, and together we have brought polio to the brink of eradication. American institutions have contributed to and benefited from membership in WHO.

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Editor: Rajesh Tiwari

Virtusa Foundation's School Restoration Project Wins UNESCO 'Award of Merit' for Cultural Heritage Conservation

Virtusa, through the Virtusa Foundation, announced that the restoration of the Byramjee Jeejeebhoy Parsee Charitable Institution (B.J.P.C.I) in Mumbai has been honored with the 'Award of Merit' from the UNESCO Asia-Pacific Awards for Cultural Heritage Conservation 2024. This project, which aligns with the Virtusa Foundation's core pillars of education, empowerment, and environment, highlights Virtusa's commitment to sustainability and social impact. By supporting restoring this 134-year-old structure, Virtusa has helped preserve a vital piece of history while ensuring the institution continues to inspire and educate underserved communities for generations.

The restoration, led by conservation architect Vikas Dilawari and supported by the Virtusa Foundation, revitalized the school's intricate architectural features, including teakwood screens and colorful glass. Renowned Victorian architect and engineer Khan Bahadur Muncherji C. Murzban designed the school, which is one of the last remaining structures in Mumbai built in the Gothic architectural style. Established in 1890 by Byramjee Jeejeebhoy, the restoration preserves the school's historical significance while adapting it for future generations. Serving over 1,500 students, this initiative is a testament to Virtusa's dedication to fostering education and uplifting communities through sustainable initiatives.

Amit Bajoria, Chief Financial Officer of Virtusa Corporation, stated "The UNESCO recognition of B.J.P.C.I. is a remarkable example of Virtusa's commitment to engineering with purpose. This project beautifully illustrates how preserving heritage can inspire and educate generations while aligning with the principles of sustainability. At Virtusa, we see innovation as a means to safeguard legacies that empower the future. This restoration project exemplifies our dedication to education, cultural preservation, and creating meaningful connections between the past and the future."

Rustom N.B., Trustee of the B.J.P.C.I remarked "This prestigious UNESCO Award profoundly acknowledges the importance of preserving our shared heritage for future generations. With the steadfast support of the Virtusa Foundation, the B.J.P.C.I stands as a beacon of resilience, excellence, and the timeless values of education and cultural preservation. This honor reinforces our commitment to advancing a legacy of leadership in cultural heritage and educational excellence."

Since 2000, the UNESCO Asia-Pacific Awards for Cultural Heritage Conservation have recognized over 900 projects across 27 countries, promoting heritage preservation and renewal. This year's winners, including the B.J.P.C.I Restoration Project highlights how conservation efforts can transform communities, instilling pride and a renewed sense of purpose.

Other projects receiving the Award of Merit in 2024 include:

- Guanyin Hall Teahouse Conservation Project, Chengdu, Sichuan Province, China
- Helou Pavilion Conservation Project, Shanghai, China
- Observatory Tower Conservation Project, Christchurch, New Zealand

NITI Aayog and Nasscom Foundation partner to further India's Aspirational Blocks Programme to Digitally Empower One Lakh lives

Aligned with the Pradhan Mantri Digital Saksharta Abhiyan, Nasscom Foundation, in partnership with NITI Aayog, is digitally empowering one lakh lives in India's Aspirational Blocks. The initiative's initial phase focuses on bridging the digital divide by providing digital literacy training and access to essential e-governance services across 60 Particularly Vulnerable Tribal Groups (PVTG) blocks. The program will subsequently expand to include all other aspirational blocks. By promoting digital inclusion, this initiative supports the government's vision of Viksit Bharat, fostering inclusive growth and ensuring that no one is left behind in India's digital transformation journey.

The launch event, graced by distinguished members including B.V.R. Subrahmanyam, Chief Executive Officer, NITI Aayog; other NITI Aayog members; Dr. O.P. Agarwal, Distinguished Fellow; Anand Shekhar, Additional Mission Director, Aspirational Blocks Programme; Dr. Mahendra Kumar, Additional Mission Director, Aspirational Districts Programme and Aspirational Blocks Programme; Jyoti Sharma, CEO, Nasscom Foundation; and Aditya Mishra, Lead, Digital Literacy, Nasscom Foundation, highlighted the government's commitment to digitally empowering the last mile, ensuring that technology becomes a catalyst for inclusive growth and equitable development.

Building on the success of Nasscom Foundation's Aspirational Districts Programme launched in 2022, focusing on bridging the digital divide across 55 aspirational districts across 23 states through Digital Resource Centres, this initiative continues to demonstrate Nasscom Foundation's commitment to leveraging technology for social impact, driving progress and empowerment in marginalized regions across India.

According to the Tribal Development Report 2022, the literacy rate among PVTGs is just 47.7%, far below the national average of 77.3% which makes the scenario of digital growth extremely vital in these communities. To address this disparity, nasscom foundation has extended the initiative from aspirational districts to blocks by focusing on communities including women and youth between the ages of 12 and 60, equipping them with essential digital skills and resources to foster holistic growth and inclusion.

Jyoti Sharma, Chief Executive

Officer, Nasscom Foundation said, "Technology is the driving force of progress and empowerment in today's world. To achieve that growth, digital literacy becomes crucial in ensuring that India's remotest communities, especially the marginalized PVTGs, have the power to pave the way for sustainable growth and prosperity. The Aspirational Blocks Programme, in partnership with NITI Aayog, is not just about bridging the digital divide—it's about deepening democracy and ensuring active participation in shaping the vision of Viksit Bharat."

The training encompasses foundational computer skills, cybersecurity, and effective internet usage, enabling participants to confidently navigate the digital world. Community outreach campaigns are also a critical part of the initiative, raising awareness about the benefits of digital literacy and e-governance services while encouraging the adoption of digital tools. To ensure effective implementation, the program enlists local community champions as master trainers and digital ambassadors to lead these efforts along with the support from respective block administration, conducting door-to-door awareness and community mobilization.

Through this strategic collaboration, nasscom foundation is committed to meeting the key indicators of Pradhan Mantri Digital Saksharta Abhiyan including increase in use of digital devices, awareness of government sponsored schemes and services, increase community awareness on digital literacy. By addressing critical gaps in digital literacy and access, the Aspirational Blocks Programme is paving the way for a more digitally empowered India.

Axis Max Life Plants 7,000+ Saplings Across 35 Cities by 1,700 Volunteers

Axis Max Life Insurance Ltd. formerly known as Max Life Insurance Company Ltd announced planting 7000+ samplings across its 35 branches in Tier 3 and Tier 4 cities, under its 'InsureEarth' programme.

Over 1,700 volunteers, including employees, agency partners, and local community members, actively participated in a synchronized tree plantation drive in 35 Aarohan branches spread across Himachal Pradesh, Uttarakhand, Uttar Pradesh, Rajasthan, Gujarat, Maharashtra, Madhya Pradesh, Jharkhand, Bihar, West Bengal, Odisha, Andhra Pradesh, Karnataka, Tamil Nadu, and Kerala.

Axis Max Life plants 7,000+ saplings across 35 cities by 1,700 volunteers

The plantation initiative aims to promote green living by transforming local hotspots, such as parks, schools, and public spaces, into greener and cleaner environment. Additionally, local communities are being actively engaged to ensure shared ownership and long-term sustainability.

Sumit Madan, Chief Distribution Officer, Axis Max Life said, "At Axis Max Life, we believe in delivering on our promise of 'Double Bharosa'—a promise to protect not only the financial future of our customers but also the future of the planet for future generations. As we expand beyond metro and tier 1 cities, we aim to foster deeper connection with communities in these cities by providing financial security as well by actively participating in their environmental well-being. By planting saplings in these regions, the campaign is set to create a ripple effect, bringing local communities together and raising awareness about the importance of environmental preservation."

Anurag Chauhan, General Counsel, Company Secretary and Head of ESG, Axis Max Life said, "The "Insure Earth" campaign encourages active participation from local communities, reinforcing the idea that small steps toward sustainability can make a huge difference. By encouraging local communities to plant and nurture saplings, we aim to create green spaces that not only beautify our cities but also reduce carbon footprints. It allows us to contribute to the holistic development of these regions and ensure a sustainable future for all of us."

Axis Max Life's 'Insure Earth' campaign is an integral part of its CSR framework, aligning with its larger mission of building a sustainable future. With an initial rollout in key Tier 3 and 4 cities', the campaign aspires to create lasting change while reinforcing the brand's position as a socially responsible company.

Tata Group and IISc partner to establish medical school to pioneer healthcare education and research

The Tata Group has partnered with the Indian Institute of Science (IISc) to establish the Tata IISc Medical School in the IISc Bengaluru campus.

Under an MoU, the Tata Group will make a contribution of Rs 500 crore to support the establishment of the medical school.

The Tata IISc Medical School will be a centre of excellence that seeks to catalyse a unique model of clinical research and medical education in India, by bringing basic science and engineering to bear on clinical science and practice. It will focus on a variety of specialities including oncology, cardiology, neurology, nephrology, diabetes and metabolic disorders, infectious diseases, integrative medicine, and public health.

The Tata IISc Medical School will offer integrated MD-PhD and other dual degree programmes to create a new cadre of physician-scientists and medical technologists. These students will be trained simultaneously in the medical school as well as science and engineering labs at IISc, combining cutting-edge clinical practice with scientific research. The medical school seeks to establish a unique model of clinical research and training that can be emulated nationwide. It will also collaborate with renowned medical schools from across the world to enable students to acquire global expertise, knowledge and practices.

On this occasion, N Chandrasekaran, Chairman, Tata Sons said: “Healthcare is one of India's biggest challenges and also one of its greatest opportunities, given the scale at which technology will be able to transform everything from diagnosis to care and community health. We are pleased to announce the establishment of the Tata IISc Medical School. In time, the institute’s emphasis on cutting-edge research and global collaboration will create a highly qualified cadre of physician-scientists trained in the latest approaches to modern medicine. Their effect will be felt across the spectrum of healthcare, and will help individuals access quality treatment. I believe that the Tata IISC Medical School will play a significant role in keeping our communities healthy and positioning India at the forefront of the global healthcare revolution."

K. Krithivasan, CEO, TCS, Noel Tata, Chairman, Tata Trusts, N. Chandrasekaran, Chairman, Tata Sons, Prof G Rangarajan, Director, IISc and T.V. Narendran, MD, Tata Steel

“We are very grateful to the Tata Group for their generosity,” said Prof G Rangarajan, Director, IISc. “After a century of contributions to science and engineering, we now have a unique opportunity to create new frontiers in medicine. The Tatas and IISc have a century-old legacy of commitment to excellence. The Institute owes its existence to the munificence and far-sighted vision of Jamsetji Nusserwanji Tata, who was unparalleled in his philanthropy towards education in India. We are firmly committed to carrying forward this legacy and breaking new ground in creating affordable healthcare solutions for India and the rest of the world.”

UN Development Programme (UNDP) and The Coca-Cola Foundation (TCCF) partner to scale up management of plastic waste in Asia

The United Nations Development Programme (UNDP) and The Coca-Cola Foundation (TCCF) have partnered to help address the growing challenge of plastic waste management in Asia, a region that is home to significant environmental opportunities and challenges. Rapid urbanization, increasing demand for single-use plastics, and gaps in waste management infrastructure have contributed to a rising volume of plastic waste, making effective solutions more urgent than ever.

A significant portion of the world's plastic waste enters the ocean through waterways in the region, posing serious threats to marine ecosystems, human health, and livelihoods. Sixteen of the top twenty polluting rivers in the world are in Asia, and account for more than two thirds -of the global annual volume of plastics flowing into the world's oceans.

In response to this urgent issue, UNDP and TCCF are scaling up efforts in nine Asian countries—Bangladesh, Bhutan, Cambodia, India, Maldives, Nepal, Philippines, Sri Lanka, and Vietnam—supported by a $15 million grant from TCCF to support UNDP's initiatives across the region. The three-year multi-country programme launched in India today, will help improve plastic waste management, promote recycling, reduce plastic leakage into the environment, foster country-based solutions, and facilitate regional collaboration. By adopting and disseminating best practices across the region, the programme aims to inspire policy changes and community-level actions to reduce and help to eliminate disposable plastic and improve the livelihoods of waste workers.

While expanding successful initiatives, the programme will focus on developing innovative business models for waste collection and recycling, offering technical advice on environmental best practices and tapping into the latest technology to improve collection and recycling, to reduce plastic leakage.

"Tackling plastic waste isn't just about cleaning up – it's also about building a smarter development model. Across Asia, countries are combating the problem by embracing the circular economy. Through our Zero Waste and Plastics initiatives, we are helping them craft policies, attract investments, and reduce the consumption of single-use plastics," said Christophe Bahuet, UNDP Deputy Regional Director for Asia and the Pacific. "With this initiative, we are also empowering communities to scale up solutions that will effectively reduce plastic pollution and safeguard our planet."

"Collaboration is key to help improve waste management systems and strengthen recycling infrastructure. Through our collaboration with UNDP, the Foundation aims to advance solutions that minimize packaging waste, support better collection methods, and enhance processing capabilities. This approach not only helps address plastic waste more effectively but also contributes to long-term improvements in local communities and the broader environment." said Carlos Pagoaga, President, The Coca Cola Foundation.

BMC, HUL, and JSW Foundation Launch Second Jointly Set-Up Suvidha Centre

Taking forward their strategic partnership to set up 10 new Suvidha Centres across Mumbai, Hindustan Unilever Limited (HUL) and JSW Foundation, launched the second Suvidha Centre in Dindoshi, Goregaon. This initiative builds on the successful Suvidha Model initiated by HUL in 2016, making this the 20thth centre as part of HUL's public-private partnership with the Brihanmumbai Municipal Corporation (BMC), JSW Foundation and HSBC India.

Suvidha is a purpose built, sustainable and first-of-its-kind urban water, hygiene and sanitation community center that provides hygiene and sanitation solutions to low-income households in Mumbai.

Key Highlights of the New Suvidha Centres:

The Suvidha Centres are designed to address the comprehensive hygiene and sanitation needs of low-income communities, offering all essential services under one roof. The tested and proven holistic approach is built around human centric design, providing safety to women & children, and working with the communities. These facilities, in addition to strong community engagement and strong operating processes leads to high satisfaction and improved health outcomes among users.

1. **24x7 access:** The new centre will benefit an additional 20,000 people, providing access to safe toilets that run 24x7, purified drinking water, showers, and laundry services.
2. **Affordable Amenities:** Services will be offered at affordable rates
3. **Inclusively designed** keeping in mind the needs of women, children, elderly and the differently abled
4. **Focus on Safety of women & children:** The centre has separate washrooms for men, women and children with facilities for senior citizens and the specially-abled. To ensure safety of the women using the facility, the washrooms are equipped with a 'panic button' for emergencies.
5. **Sustainability at the core:** 180 million litres has been saved cumulatively through water management practices at the Suvidha Centres. The centres are powered by solar energy.
6. **Behavior change programs:** HUL and JSW Foundation will run a comprehensive behaviour change program in the communities around the centre to ensure improvement in individual and overall community health.

"At HUL, we're proud to drive transformative change through our Suvidha centres, providing best-in-class hygiene and sanitation facilities. This pioneering model, initiated in 2016 by HUL stands as a testament to the power of partnerships. We, along with our partners remain committed to creating a healthier and more sustainable future for all"- Sashidhar Vempala, Chief

Sustainability Officer, Hindustan Unilever Ltd.

Commenting on the launch, Harshvardhan Nawathe, CEO of JSW Foundation said, "We remain committed to strengthening urban communities through our collaboration with Hindustan Unilever Limited and the Brihanmumbai Municipal Corporation. Our primary focus is providing accessible and affordable sanitation facilities in densely populated pockets across Mumbai while ensuring the safety of women and children."

Additional details about Suvidha centre

- 500,000 men, women, and children currently have access to clean sanitation facilities through these 20 centres
- 180 Million liters of water saved by 20 centres cumulatively till date
- 9 in 10 users find Suvidha centers easy to access and inclusive
- 98% women believe Suvidha is safe for them and their children
- ~50% reduction in Diarrhoea and UTI cases among Suvidha users
- Over 90% user satisfaction among women and children on Suvidha services

RBL Bank donates 200 bicycles to girl students in Goa under its CSR Initiative UMEED

RBL Bank, one of India's leading private sector banks, through its CSR initiative – UMEED, has distributed a total of 4,835 bicycles since 2023. The RBL Bank reinforced its dedication to supporting girl child education by distributing 200 bicycles to underprivileged girls in Goa.

The initiative addresses one of the significant challenges of school dropouts among the girl students, the long distance between their homes and educational institutions.

The bicycle donation drive was held at Ravindra Bhavan, Sanquelim Desai Nagar, Harvale, Goa in the presence of Dr. Pramod Sawant, Chief Minister, Goa, Shailesh Zingde , Director Of Education, Vijay B. Saxena , Director (DPSE)/ Joint CEO, Goa CSR Authority, and senior dignitaries from RBL Bank.

The UMEED initiative aims to offer a practical and sustainable solution by providing underprivileged girls with access to reliable transportation. These bicycles will empower them to commute to school efficiently while promoting an energy-conscious and environmentally friendly approach. This year, RBL Bank aims to distribute over 1,800 bicycles and school kits across India, reinforcing its commitment to supporting education and empowering young minds. R. Subramaniakumar, MD & CEO, RBL Bank said, "At RBL Bank, we believe that education is the cornerstone of a bright future. Through our CSR initiative, UMEED, we strive to address critical barriers that prevent children from accessing quality education. By providing bicycles and school kits, we aim to empower young girls to overcome obstacles and pursue their dreams. This initiative underscores our unwavering commitment to creating a more inclusive and equitable society, where every child has the opportunity to learn, grow and thrive."

RBL Bank's UMEED initiative has been a beacon of hope for marginalised communities across the country. With a focus on enabling education and fostering opportunities, the Bank continues to lead impactful outreach programmes that bring meaningful change. The distribution of bicycles and school kits is yet another step toward building a brighter, more sustainable future for India's youth.

Launch of Taj Swagat Manual in Braille and Indian Sign Language at India Gate

Taj Mahal, New Delhi Celebrates World Braille Day with Menus in Braille and Inclusive Initiatives

On the occasion of World Braille Day, Taj Mahal, New Delhi reaffirmed its commitment to diversity, inclusion, and accessibility through thoughtful initiatives that set new benchmarks in hospitality. The hotel invites guests to explore menus in Braille across all its celebrated restaurants, ensuring that every guest enjoys the independence and dignity of an inclusive dining experience - redefining the essence of thoughtful hospitality.

Earlier this year, the hotel introduced menus in Braille across its restaurants as part of its ongoing efforts to make luxury dining accessible to all. Complementing this initiative is the launch of the Taj Swagat Manual, an induction guide for new colleagues at Taj Mahal, New Delhi, available in Braille and supported by Indian Sign Language (ISL). The manual showcases Taj Mahal, New Delhi's sustained efforts to create spaces that are welcoming for everyone, including its workforce.

Blind Bakes Café at Taj Mahal, New Delhi

Menus in Braille at Taj Mahal, New Delhi

Reflecting on these initiatives, Dr. Anmol Ahluwalia, Area Director – Operations and General Manager at Taj Mahal, New Delhi, shared: "World Braille Day is a powerful reminder of the importance of inclusivity in every sphere of life, especially in hospitality. At Taj Mahal, New Delhi, we believe that true luxury lies in creating experiences where every individual feels valued and empowered. From offering menus in Braille to introducing the Taj Swagat Manual, our initiatives aim to inspire a culture of accessibility and respect. Hospitality is about enriching lives and building connections, and we are proud to lead by example in making inclusion a cornerstone of luxury."

He added: "Inclusivity is not just a principle but a way of life at IHCL. Guided by Paathya, we continue our legacy of driving meaningful change. By aligning our efforts with the needs of the communities we serve and championing accessibility, we strive to redefine hospitality as a force for social good."

At the heart of these initiatives is Paathya, IHCL's sustainability and social impact framework. Derived from the Sanskrit term पथ्य, meaning 'path,' Paathya reflects IHCL's commitment to environmental stewardship, social responsibility, heritage preservation, value chain transformation, and sustainable growth. This framework embodies over a century of IHCL's dedication to meaningful impact, ensuring that its initiatives benefit communities and the environment alike.

Additionally, the hotel has partnered with organizations like the NAB India Centre for Blind Women and Disability Studies to pioneer innovative initiatives such as the Blind Bakes Café. This initiative empowers visually impaired women with culinary and housekeeping skills, offering them valuable opportunities for personal and professional growth.

Vitamin Angels India joins Vitafoods India 2025 as Cause Partner to advance nutrition for underserved communities

Vitamin Angels India, a leading global non-profit dedicated to improving maternal and child nutrition among underserved communities, has been announced as the official Cause Partner for Vitafoods India 2025, the premier event for the nutraceutical and wellness industry. The event will take place from 5-7 February 2025, at Pavilion 1-2, Jio World Convention Center, Mumbai. As a Cause Partner, Vitamin Angels India will work alongside Vitafoods India to drive awareness and action toward addressing malnutrition and micronutrient deficiencies among underserved communities in India. The collaboration aims to foster meaningful industry engagement, encourage corporate social responsibility initiatives, and highlight the crucial role of nutrition in addressing key public health.

Speaking on the partnership, Sunish Jauhari (President, Vitamin Angels India) said, "We are honoured to be the Cause Partner for Vitafoods India 2025, a platform that brings together key stakeholders from the nutraceutical and wellness industry. This collaboration will amplify our mission of ensuring essential nutrition reaches vulnerable mothers and children across India. We look forward to engaging with industry leaders to create lasting impact and drive sustainable solutions in the fight against malnutrition."

Vitamin Angels India has been working to foster nutrition equity through its evidence-based interventions. These include using implementation science (IS) to advise governments, other NGOs and local stakeholders. Distribution of life-saving Vitamin A Supplements (VAS) and deworming tablets to the children in need. Projects to alleviate nutritional awareness, foster nutrition seeking behaviour, and train and support frontline health workers.

Speaking on the collaboration, Yogesh Mudras, Managing Director, Informa Markets in India said, "At Vitafoods India 2025, we believe the true impact of the nutraceutical industry lies not only in driving innovation and business growth but also in creating meaningful solutions for pressing societal challenges. Our collaboration with Vitamin Angels India, as our official Cause Partner, exemplifies this vision by bringing together industry leaders to address malnutrition and improve access to essential nutrition for disadvantaged populations. This partnership highlights the power of collective action in shaping a healthier and more equitable future. We are proud to support initiatives that inspire the industry and contribute to the well-being of communities in need."

Vitafoods India will bring together leaders, influencers, and decision-makers from the nutraceutical, functional food, and dietary supplement industries, showcasing a dynamic representation of the sector. This year, the event will host 136 domestic, 23 international exhibitors and 35 expert speakers. It is expected to attract over 8,000 visitors, reinforcing its role as a premier networking and knowledge-sharing platform for the nutraceutical ecosystem.

Force Motors Limited Secures Prestigious Contract to Supply 2429 Ambulances to Uttar Pradesh Government Health Department

Force Motors Limited, India's leading manufacturer of commercial and specialty vehicles, is proud to announce its selection by the Uttar Pradesh Government Health Department to supply 2429 ambulances, reinforcing its position as the preferred choice for emergency medical transport in the country.

Force Motors, a pioneer in the automobile industry, has been synonymous with reliability, innovation, and excellence since its inception. Over the years, the company has emerged as a trusted partner for both the government and private healthcare sectors, delivering solutions tailored to meet India's diverse and challenging terrain and infrastructure requirements.

The Force Traveller Ambulance, a hallmark of engineering excellence, is widely recognized as India's most trusted and preferred ambulance. Known for its unparalleled reliability, spacious interiors, and robust build quality, the Traveller Ambulance offers:

- **Exceptional Safety and Comfort:** Designed to ensure patient safety and comfort during transit, it is equipped with advanced suspension systems, ergonomic seating arrangements, and optimized space for medical equipment.
- **Customizable Variants:** Available in multiple configurations, including Patient Transport, Basic Life Support (BLS), Advanced Life Support (ALS), and Mobile Medical Unit (MMU), catering to the varying needs of healthcare providers.
- **Unmatched Durability:** Built to withstand India's challenging road conditions, ensuring uninterrupted performance when it matters the most.

Force Motors ambulances are equipped with powerful drivelines and other aggregates that help patient transportation in the minimum possible time, giving importance to the Golden Hour.

With a dominant market share in the Indian ambulance segment and a growing global presence, Force Motors has consistently set benchmarks for quality and performance. Trusted by state governments, hospitals, private healthcare providers, and NGOs alike, the Traveller Ambulance has earned its reputation as the go-to solution for emergency medical transport. Its adaptability, low maintenance costs, and proven reliability make it a preferred choice for stakeholders.

Prasan Firodia, MD, Force Motors

The UP-Government Health Department's decision to procure 2429 ambulances from Force Motors underscores the state's commitment to strengthening its healthcare infrastructure. These vehicles will play a pivotal role in enhancing emergency response capabilities and ensuring timely medical assistance for millions of residents across urban and rural areas.

Speaking on the achievement, Prasan Firodia, Managing Director of Force Motors Limited, said, "We are proud to be chosen by the Uttar Pradesh Government Health Department for this important healthcare initiative. This milestone reinforces Force Motors' commitment to providing dependable, high-quality solutions catering to India's unique healthcare needs. We remain dedicated to driving innovation and delivering quality products."

CSR INDIA UNITED

Waaree Energies Leads by Example, Gifts Solar System to Rural School

Waaree Energies Ltd., India's largest solar PV module manufacturer, has brightened the future of rural education by gifting a state-of-the-art solar power system to Shri Sant Koteshwar Maharaj Vidhyalaya in Eklara Banoda. This initiative marks another milestone in the company's mission to merge educational advancement with environmental stewardship. The installation, which provides uninterrupted power supply to the village school, represents more than just an infrastructure upgrade- it's a beacon of sustainable development in rural India. With this system, students and staff now enjoy a learning environment free from the disruptions of power outages, setting a new standard for educational facilities in remote areas.

Speaking on the initiative, Prabhu Narayan Singh, Chief Sustainability Officer (CSO), Waaree Energies Limited said, "This solar installation reflects our commitment to revolutionising rural education through sustainable innovation. By empowering schools with clean energy, we are not only illuminating classrooms but also fostering a generation that values environmental stewardship. This dual impact aligns seamlessly with Waaree's mission to create a brighter, more sustainable future for communities across India."

The project aligns with Waaree's broader community initiatives, following their recent success in Kawani, Bikaner, where they provided essential school supplies to 5,000 underprivileged students and conducted an extensive tree plantation drive. As India's largest solar PV module manufacturer, with an impressive 13.3 GW aggregate installed capacity, Waaree continues to lead by example in combining business excellence with social responsibility.

The solar power system installation significantly reduces the school's energy costs, allowing funds to be redirected to educational programs while providing students with hands-on exposure to renewable energy technology. This initiative reflects Waaree's commitment to fostering sustainable communities while addressing India's energy transition needs, demonstrating how corporate leadership in renewable energy can create lasting positive impact at the grassroots level.

SBI General Insurance and Creative Group Collaborates to Launch Ambulance for Rural Healthcare Development

SBI General Insurance, one of India's leading general insurance companies, has partnered up with Creative Group, an NGO dedicated to enhancing community healthcare, to roll out the "Ambulance for Rural Healthcare Development" initiative. As part of the collaboration, the project will provide a specially equipped Force Basic Life Support ambulance to transport patients from remote villages to Shree Mahaganpati Hospital, ensuring timely access to emergency medical care.

This project aims to deliver essential healthcare services to rural areas around Titwala, Murbad, Khandavali, and approximately 68 nearby villages. A significant challenge for residents in these regions has been the lack of timely medical transportation. Without reliable access to healthcare facilities during critical emergencies, many patients have struggled to receive the care they need. Recognizing this pressing issue, SBI General Insurance has stepped forward to support this vital initiative, which will deliver both emergency transportation and preventive healthcare services to thousands of people in these communities.

Speaking on the project, Rathin Lahiri, Head – Marketing & CSR at SBI General Insurance, said: "We are proud to partner with Creative Group on this significant healthcare initiative. At SBI General Insurance, we are deeply committed to improving the health and well-being of communities, especially those in underserved areas. This partnership will ensure that people in Titwala and the surrounding rural region have access to timely medical care and preventive healthcare, ultimately making a positive impact on their lives."

The project aims to transport approximately 40-50 patients each month, ensuring they reach hospitals in time for critical care.

Vikrant Bapat, Chairman, Creative Group, added: "Creative Group is working since last 24 years in the field of rural healthcare for Titwala and surrounding 68 villages, initially through Creative Polyclinic for first twelve years and next twelve years through Shree Mahaganpati Hospital, which was the first multispecialty secondary care level 50 bedded NABH accredited hospital. We receive over 150 emergency patients at our casualty per month, few patients needs tertiary care, ambulance donated by SBI General Insurance will play vital role for safe transportation of patients, also will help us to conduct free medical checkup camps at adivasi padas and interior villages".

The project aims to transport approximately 40-50 patients each month, ensuring they reach hospitals in time for critical care. In addition, 24 health camps will be organized throughout the region, providing free preventive health checkups and consultations to around 1,000 individuals. These camps will help enhance early disease detection and raise overall health awareness within the community.

Cult and SADS Collects 2000+ Pounds of Donations, Transforming Lives of 4000+ Families

Cult, India's leading fitness platform, in collaboration with Share At Doorstep (SADS), has successfully concluded its annual clothing donation drive across four major cities- Bangalore, Mumbai, Delhi, and Hyderabad. Held in December, the initiative embraced the spirit of the "Month of Giving" and inspired communities to donate their pre-loved clothing to support underserved families. The event saw an overwhelming response, with donations collected from 46 Cult centres across the cities. SADS ensured seamless execution, managing doorstep pick-ups, center-based collections, and distribution to NGOs and charities.

- **Donations were collected at 46 participating Cult centres across Bangalore, Mumbai, Delhi, and Hyderabad.**
- **Items were distributed to verified NGOs and charities, directly benefiting families in need.**
- **The event reinforced the importance of community-driven efforts to bring social change.**

Donations poured in from 46 Cult centres across the cities

The initiative reflects Cult's commitment to combining fitness with purpose. Members and participants donated their "apparels and footwear," symbolizing personal transformation and extending it to societal impact. This year's drive resulted in the collection of 2000+ pounds of donation, benefiting 4000+ families.

"The response to this year's donation drive has been truly heartwarming. It's inspiring to see how our members and the wider community came together to make a difference. With SADS, our mission is to make giving simple and impactful, and partnering with Cult has amplified our reach and ensured that every donation creates meaningful change for underserved communities. This initiative highlights the power of collective action during the Month of Giving", said Naresh Krishnaswamy, CEO of Curefit.

The December donation drive is now a hallmark of Cult's social responsibility efforts, with plans to make it an annual tradition. SADS, with its expertise in logistics and partnerships, played a pivotal role in ensuring the success of this initiative.

Participants during the event

IIT Guwahati Inaugurates Tree-Based Enterprise Incubation Center to Drive Sustainable Agroforestry and Rural Development

The School of Agro and Rural Technology (SART) at Indian Institute of Technology Guwahati inaugurated the Tree-Based Enterprise Incubation Center (TBEIC) under the Tree Outside Forests in India (TOFI) initiative on 10th January 2025.

This pioneering center aims to foster sustainable, tree-based enterprises that contribute to India's environmental, economic, and rural development goals.

The TBEIC is designed to develop value chains for various tree crops, promote large-scale plantations, and foster innovations in tree-based products and services. Leveraging IIT Guwahati's intellectual resources and its strategic location as a gateway to the Southeast Asian market of 800 million people, the center is expected to drive regional and global impact.

The inauguration was presided over by Dr. Steven Olive, USAID Mission Director – India, and Prof. Devendra Jalihal, Director, IIT Guwahati. Other distinguished guests included:

- Shri Sandeep Kumar, IFS, Principal Chief Conservator of Forests & Head of Forest Force (PCCF & HoFF)
- Dr. Ramesh C., Chief Conservator of Forest cum Field Director, Manas National Park, Govt of Assam
- Dr. Ravi Prabhu, Senior Advisor, CIFOR-ICRAF
- Mr. Manoj Dabas, Chief of Party (CoP), CIFOR-ICRAF
- Dr. Varghese Paul, Deputy Director, Environment and Natural Resources, USAID India
- Mr. Sankar Das, DGM, NABARD, Assam

The event also saw participation from key stakeholders representing the Government of Assam and IIT Guwahati, including Dr. Kaberi Mahanta, Senior Scientist, AAU-Horticulture Research Station, Kahikuchi; Dr. Dhrubajyoti Sarmah, MD, Daffodil College of Horticulture; Mr. M. C. Sarmah, CGM, Century Plywood Ltd.; Mr. Pankaj Barman, State Head, Samunnati Foundation; Mr. Parama Malli, Scientist, Northeast Cane and Bamboo Development Council, Govt of India; Mr. Koutillya Basumatary, GM-NE, Tata Trust; as well as Prof. Sukumar

Nandi, Dean Administration; Prof. S.K. Kakati, Founder Head, SART; Prof. Sudip Mitra, HoD, SART; Prof. Sudip Mitra, HoD, SART; Dr. Siddhartha Singha, PI ToFI Project, and Dr. Sagar Deshmukh, Assistant Professor, SART and Co-PI ToFI Project, among others.

Speaking at the inauguration event, Dr. Steven Olive, USAID Mission Director-India, said, “IIT Guwahati is a wonderful place to study and innovate. What is exciting is how new startups, empowered by emerging technologies like artificial intelligence, are shaping the future. They are bridging the gap between old and new, creating opportunities that will benefit both India and the world. At USAID, we are thrilled to be partnering with IIT Guwahati, Assam, and the TOFI team to catalyse these innovations, helping bring transformative technologies to farmers and communities. This partnership is just the beginning, and in the years ahead, I look forward to seeing how these advancements will change the world."

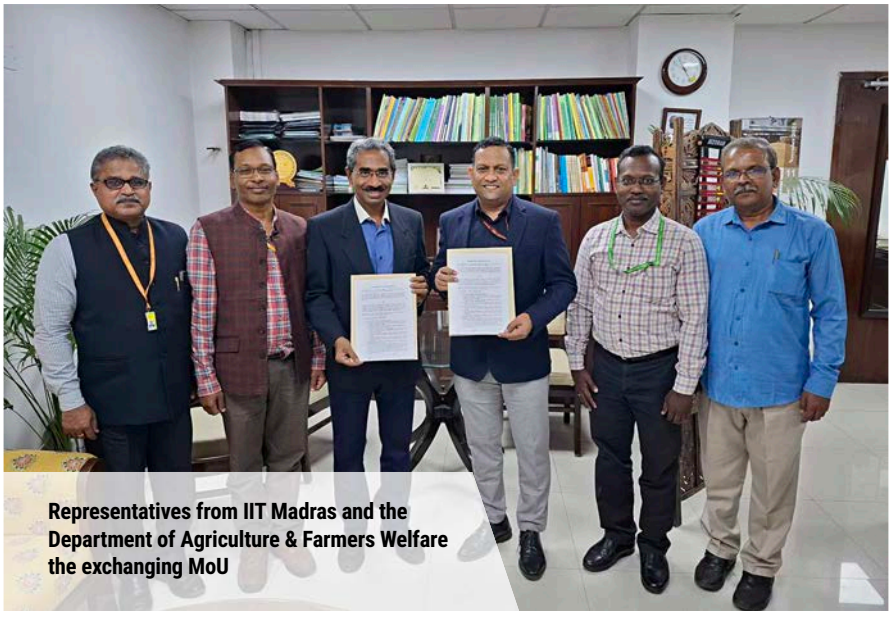
The Tree-Based Enterprise Incubation Center (TBEIC) at SART, IIT Guwahati, is designed to play a pivotal role in incubating and supporting tree-based enterprises (TBEs). It aims to enhance the technical and business skills of entrepreneurs, familiarise stakeholders with advanced agroforestry technologies, provide comprehensive support in business planning, financing, and marketing, and de-risk the setup process for new enterprises. Through these focused initiatives, the TBEIC seeks to empower stakeholders and foster sustainable growth in tree-based enterprises. Speaking about IIT Guwahati’s role in fostering innovation and sustainable development, Prof. Devendra Jalihal, Director, IIT Guwahati, said, "As the premier institution in the Northeast, IIT Guwahati is dedicated to driving innovation and sustainable growth in the region. Through collaborative efforts with organisations like USAID and local communities, we aim to empower agro-based ventures and promote eco-friendly, resource-efficient solutions. Our goal is to leverage the region’s rich ecological and cultural assets to create impactful, long-term change."

The TBEIC will focus on a range of technologies critical to tree-based enterprise development, including:

- Wood and bamboo-based composites and furniture manufacturing
- Bamboo-based cosmetic products and natural dye manufacturing
- Agarwood processing, medicinal herbal foods, and other herbal products
- Biomass palletisation, latex tapping, and rubber intermediate production
- Modern plantation technology and carbon credit enabling technology
- Fresh and freeze-dried fruits and other agroforestry innovations

Speaking at the event, Dr. Ramesh C., Chief Conservator of Forests and Field Director, Manas National Park, Government of Assam, said, "This project holds immense potential for the future. The technology and expertise from IIT Guwahati can help us identify sustainable alternatives to firewood, ensuring that trees grown outside forests can benefit communities without depleting our natural resources. By promoting tree cultivation and processing in rural areas, we can empower local communities while protecting the environment. This initiative is driven by both a personal commitment and a deep dedication to preserving our natural heritage."

The strategic goals of the TBEIC are in alignment with TOFI’s broader objectives, which include strengthening the enabling environment for tree-based enterprises, providing economic incentives while mitigating risks for stakeholders, and enhancing access to information about Trees Outside Forests (TOF). Through the promotion of sustainable entrepreneurship and innovative agroforestry practices, the TBEIC aims to significantly improve livelihoods and strengthen environmental resilience in the region.



Representatives from IIT Madras and the Department of Agriculture & Farmers Welfare the exchanging MoU

IIT Madras to collaborate with Union Agriculture Ministry on Project VISTAAR

The Indian Institute of Technology Madras (IIT Madras) is collaborating with the Ministry of Agriculture and Farmer Welfare, Government of India, on Project VISTAAR, which seeks to improve the efficiency and effectiveness of the agricultural extension system through Digitalization. The Pilot Project VISTAAR (Virtually Integrated System to Access Agricultural Resources) seeks to further strengthen the agricultural extension system.

Start-ups are known for their innovation and capabilities to use technology to bring new products and services to market. The context of agriculture sector presents unique opportunities for start-ups, both from the supply side and demand side. The technologies and innovations can benefit the farmers in agriculture and allied sectors to improve efficiencies and productivity while also helping on market information.

The Centre for Research on Start-ups and Risk Financing at IIT Madras along with its incubated start-up YNOS Venture Engine have developed the most comprehensive information on the Indian start-up landscape.

The MoU signed recently between the Agriculture Ministry and IIT Madras enables them to enrich the VISTAAR platform with information about start-ups in the agriculture and allied sectors. This would enable farmers and other stakeholders in agriculture and allied sectors to be aware of the capabilities and offerings that start-ups have and easily access them.

Highlighting the importance of this collaboration, Prof. Thillai Rajan A., Head, Centre for Research on Start-up, IIT Madras, said, "Agriculture forms the backbone of India's social and economic rubric. Ensuring a strong agriculture sector therefore becomes a major policy imperative. Start-ups have an important role to play in bringing innovation across the value chain in the agriculture and allied sectors."

Further, Prof. Thillai Rajan A., also a faculty in the Department of Management Studies, IIT Madras, added, "The Start-up information platform developed by the Centre for Research on Start-ups and Risk Financing at IIT Madras along with its incubatee start-up YNOS Venture Engine has information about 12,000 start-ups that are connected to the agriculture and farming sectors. This collaboration would bring this rich information within the easy reach of the farmer and contribute to the effectiveness of extension services of the Department of Agriculture and Farmer Welfare significantly."

Further, Samuel Praveen Kumar, Joint Secretary (Extension), Ministry of Agriculture and Farmers Welfare, said, "Innovative technologies of Agri Start-ups contribute towards making Agriculture sustainable and climate resilient and therefore connecting the technology of Agri startups with farmers through Extension is critical from an access and adoption perspective and the collaboration with IITM would surely pave way for achieving this objective through VISTAAR DPI for Agriculture Extension."

Digitalization of the existing extension system will expand its outreach substantially and enable every farmer to access high-quality advisory services on crop production, marketing, value and supply chain management. The advisory services will also provide information about all Government schemes related to agriculture and allied sectors including rural development from which the farmers can be benefited.

The process of digitalization augments the current agricultural extension system by providing timely, contextual and accurate information and advisories to the farmers on agriculture and allied sectors.

Much of India's thousands of kilometres of coastline are eroding, fast. The National Centre for Coastal Research (NCCR), a government body, estimates that 33.6 per cent of the shore is vulnerable to erosion. *Image: Prashanth Swaminathan, CC BY-SA 3.0, via Flickr.*

INDIA'S COASTS ARE ERODING AS STATES FAIL TO PLAN PROPERLY

Hard structures are still being built for erosion control, despite a national court ruling against them, writes **Laasya Shekhar**

Arichal Munai Beach lies at the eastern tip of Rameswaram Island, in southern India's Tamil Nadu state, just past the abandoned village of Dhanushkodi.

Looking out onto the Gulf of Mannar with nothing but sea between it and Sri Lanka's northern shore, Arichal Munai offers a picturesque view of clear blue waters, and a rather less picturesque view of rocks bolstered by concrete. Rows of such rocks have been

installed along this coastline in an attempt to protect the shore from the waves eroding it. But critics say these hard structures are diverting the problem to nearby areas and causing the sea to creep closer to fishers' hamlets in other parts of Tamil Nadu's coastline.

"With the beach replaced by waters, we struggle to park our boats," says G Anand, a local fisher at Dhanushkodi. The 53-year-old once supported these defences but now regards them as a problem. "The population of turtles that comes to the shore for breeding has also been reducing over the years."

In 2022, India's highest environmental court ordered regional governments to try and avoid hard shoreline defences where possible, and to implement comprehensive plans to manage their coasts. But states and union territories are still building these concrete structures and many have failed to draw up such plans, in apparent defiance of the court's ruling.

Going hard on coasts under threat

Beaches grow when currents deposit more sediment than they carry away. With this in mind, barriers called groynes are sometimes built out into the sea. Perpendicular to the shore, these protect beaches by catching and trapping sand that would otherwise be washed elsewhere. But groynes can also make erosion worse for nearby locations.

Probir Banerjee of the National Coastal Protection Campaign, a collective of environmental and fishing associations, explains the effect: "One part of the coast gets an excess of sand, and the other side on the down-drift is starved of sediment. The side that is starved of sediment erodes as long as fresh input of sand is not provided."

Many experts therefore discourage use of groynes and sea walls in favour of "soft" defence strategies, such as replenishing lost beach sand and encouraging sand dunes by planting grass. Hard structures on beaches can also have a disastrous effect on marine flora and fauna. They have the potential to damage habitats that support fish, crustaceans and shellfish, and to prevent sea turtles from nesting.

Much of India's thousands of kilometres of coastline are eroding, fast. The National Centre for Coastal Research (NCCR), a government body, estimates that 33.6 per cent of the shore is vulnerable to erosion, while only 26.9 per cent is growing.

Some regions are more vulnerable than others: over 50 per cent of the coasts of West Bengal and Puducherry are eroding, according to NCCR data. Coastal erosion is a consequence of natural processes, climate change and anthropogenic activities. Hard structures built to solve it might not be helping and are known to worsen erosion near where they are installed, by starving areas of sediment.

"Hard engineering measures have actually worsened erosion," says a senior official at the Department of Fisheries (speaking on condition of anonymity). "For example, after groynes were installed at Chennai's Thalankuppam Beach, the shoreline has receded by 12 metres, with water now reaching the main road. Although natural solutions are more effective, securing government funding for them remains challenging."

The National Centre for Coastal Research (NCCR), a government body, estimates that 33.6 per cent of the shore is vulnerable to erosion, while only 26.9 per cent is growing.

Despite concerns over ill effects, last year Chennai's government constructed two large groynes at the coastal hamlet of Karikattukuppam, extending 120 metres out to sea. The work was in response to pleas from fishers, whose hamlets are threatened by the sea.

It is not just Chennai putting its faith in hard engineering. The Maharashtra government has constructed a large sea wall at Mumbai's Aksa beach. And in October 2024, Kerala's irrigation department started building eight groynes in the Poonthura region. Meanwhile, in Tamil Nadu's Chengalpattu district, groynes, sea walls and artificial barriers were constructed across at least 10 coastal villages in the past year, local sources tell Dialogue Earth.

Green court's soft approach

These constructions violate a legally binding ruling by India's green court, the National Green Tribunal (NGT). In 2022, it directed Indian states and union territories to adopt soft solutions, such as beach nourishment, instead of hard structures like groynes.

Stressing that hard measures only transfer the problem of shoreline change, the NGT told states and union territories to prepare and update their shoreline management plans within six months. Two years later, there has been little progress.

Puducherry has implemented (and is already revising) a shoreline management plan, as directed by the NGT ruling. But neither India's three other union territories nor its nine coastal states have followed suit.

Governments, engineers and fishers often prefer hard structures because some experts say they

immediately arrest local erosion. This may seem an easy option for governments, which can base their designs on existing examples for such work, simplifying the process. By contrast, softer measures require careful scientific study of local conditions.

"There is no assessment, no design and no consultation with the stakeholders. These structures are seen as a solution for every beach, regardless of its character," says K Saravanan. The fisher and activist filed a case with the NGT in July 2024, which challenges Chennai's decision to construct Karikattukuppam's groynes without a shoreline management plan.

Fragile and fast eroding

Regional governments have chosen agencies to help them develop shoreline management plans. The National Centre for Coastal Research (NCCR) is tasked with preparing and updating plans for Tamil Nadu, Andhra Pradesh, Kerala and Puducherry.

The NCCR's director M V Ramana Murthy says draft plans for Andhra Pradesh and Tamil Nadu are with the Ministry of Environment, Forests and Climate Change for final approval. The Kerala and Puducherry plans are still being drafted.

"These plans highlight the importance of nature-based solutions to prevent coastal erosion," says Ramana Murthy. "However, state governments are often reluctant to adopt these methods due to their high maintenance and time-consuming nature, leaving the extent of their implementation uncertain."

He says the NCCR has mapped the settlements along India's entire coastline to determine the most suitable erosion-control methods: "For densely populated areas, we recommended hard engineering solutions if absolutely necessary. In moderately populated regions, we opted for hybrid approaches. While for less populated areas, we prioritised nature-based solutions. We also considered erosion rates and identified vulnerable zones to guide these decisions."

The petitioner K Saravanan says the NCCR has been relying too much on satellite imagery when it should be conducting on-the-ground surveys. He also says plans are being made without proper consultation, something fishers associations in Tamil Nadu also told Dialogue Earth.

Regional governments have chosen agencies to help them develop shoreline management plans. The National Centre for Coastal Research (NCCR) is tasked with preparing and updating plans for Tamil Nadu, Andhra Pradesh, Kerala and Puducherry.

The NCCR denies these allegations, with Ramana Murthy saying: "We have been getting inputs from the fisheries associations."

Finding a way forward

Coastal erosion is an alarming problem in the wider region, too. A 2017 estimate suggests that around 35 per cent of Indonesia's coastline is experiencing a moderate, high or very high erosion rate; 29 per cent of Malaysia's coastline faces erosion; and 50 per cent of mapped areas in the Philippines are retreating.

Some countries are taking informed action. Malaysia's Integrated Shoreline Management Plan is being implemented state-by-state following stakeholder engagement. The Philippines has been making similar moves.

By comparison, several sources consulted by Dialogue Earth fear India is lagging. They say state-level plans addressing the country's coastal erosion will require buy-in from the national government to secure swift implementation. Crucially, the education of local communities will galvanise sustainable solutions. Experts and fishers say that in most cases it is local fishers themselves who call on their government to construct hard defences.

"When such structures are constructed in one coastal hamlet, the erosion transfers to the adjoining village. And thus, they should be constructed here as well," says S Sathish Kumar, a fisher in the coastal hamlet of Alamparai Kuppam, Chengalpattu.

As regional governments consider the development and implementation of comprehensive shoreline management plans, many of India's sandy beaches face an uncertain future.

Ganeshan V, a fisherman in Cochin, Kerala, says: "Water is already reaching my house. All I can think about is stopping it. I don't have the luxury to be a good person and worry about erosion in the next hamlet, or the environmental effects of putting up these hard structures."

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(Source: https://www.eco-business.com/news/indias-coasts-are-eroding-as-states-fail-to-plan-properly/)

Bangladesh, already one of the world's wettest countries, experienced severe flooding and monsoons in 2024 due to persistent heavy rain and water surges from neighbouring India, with whom it shares many rivers.
Image: Muhammad Zubayer, CC BY-SA 3.0, via Flickr.

IN DATA: WET WEATHER TURNS WILD AS CLIMATE CHANGE BITES

Climate change turns wet weather into a new hazard, as millions are disrupted and displaced by extreme wet weather.

Last year was the hottest on record. It was also one of the wettest. Water-related disasters - including floods, droughts and storms - killed more than 8,700 people, forced some 40 million from their homes and cost the global economy more than US$550 billion, according to the 2024 Global Water Monitor report.

From floods in Spain and Brazil, to heavy rain, landslides and typhoons in Bangladesh and India, the world saw a dramatic rise in extremes, with experts blaming

climate change for the "intensity and frequency" found in many of the disasters. Scientists say climate change "increases the potential for extreme weather events" and predict more of the same in 2025.

The extremities include flash floods, excessive rainfall, droughts and storms, with the Global South particularly exposed.

Take West Africa, where heavy rains and floods killed more than 1,500 people and forced about a million to leave their homes. Scientists said the disasters were up to 20 per cent more intense because of human-driven climate change.

The downpours also destroyed thousands of hectares of farmland in the region.

Home to more than 400 million people, West Africa saw the largest number of its 15 countries report record-high annual soil moisture levels in 2024, sodden with the relentless rain and a run of floods.

When soil is drenched with water and diluted, it becomes unsuitable for crops or cattle.

In Nigeria, flooding and rain affected four-fifths of the country and destroyed more than 100,000 hectares of farmland, worsening food shortages.

Even those parts of the world used to extreme wet weather worsened by a fast-warming planet broke alarming new records.

According to the Global Water Monitor report, extreme rain events across the world were 52 per cent more common in 2024 than during the 1995-2005 period, and the highest daily rain count was up 7.8 per cent, too.

Bangladesh, already one of the world's wettest countries, experienced severe flooding and monsoons due to persistent heavy rain and water surges from neighbouring India, with whom it shares many rivers.

The low-lying nation, home to 180 million people, saw the highest daily rainfall in 17 years, with an average of 103 mm, up from its standard rain count of 70-80 mm per day. More than half a million people in Bangladesh were displaced and power outages plunged millions into darkness.

Financial losses were estimated at nearly US$500 million, and Dhaka was forced to ramp up grain imports after losing 1.1 million metric tons of rice to flooding.

According to the Global Water Monitor, Bangladesh's wet weather is becoming "increasingly erratic".

Despite generating just 0.03 per cent of global greenhouse gas emissions, Bangladesh will fall victim to "intensifying monsoons and increased extreme weather events" as human-driven climate change continues to bite, the report said.

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(Source: https://www.eco-business.com/news/in-data-wet-weather-turns-wild-as-climate-change-bites/)

THE SCIENTISTS WHO RISK IT ALL FOR RESEARCH

Scientists worldwide face growing safety risks from governments, corporations and even drug cartels, prompting urgent calls for high-level action to protect them

Filipino fisherfolk pass by a symbolic buoy protesting Chinese Coast Guard harrassment in 2023. Scarborough Shoal, located west off the town of Masinloc, Zambales is claimed by the Philippines, China and Taiwan. *Image: Joey O Razon / Philippine News Agency*

Mexican ecologist Valeria Souza Saldívar has experienced years of threats and intimidation, coming face to face with machete-wielding land defenders – all in the pursuit of science. She is one of an increasing number of scientists around the world who are at risk from governments, corporations, drug cartels, or military forces, as a direct result of the research they are undertaking.

These risks are increasing globally, a SciDev.Net investigation reveals, gathering evidence from scientists in multiple regions, particularly in low- and middle-income countries.

Souza is a specialist in the evolutionary ecology of bacteria and a researcher at the Institute of Ecology of the National Autonomous University of Mexico.

She has worked for more than 25 years in the 300 plus pools that make up Cuatro Ciénegas, in the desert of Coahuila, northern Mexico, known for its extraordinary diversity of microorganisms. Among them are stromatolites, mineral structures that are among the oldest evidence of life on Earth.

In 2002, Souza received news that would change her life: in the Hundido Valley, 275 kilometres from Cuatro Ciénegas, 200 wells would be built to extract water from the ground. Each one would irrigate 70 hectares of alfalfa that local producers could sell to companies such as the dairy firm Lala to feed their cattle.

"At that moment I became an environmentalist," says Souza. "I went to extract DNA from the water of the wells in El Hundido to compare it with the DNA of several sites within Cuatro Ciénegas … And I was able to show them that they were connected."

The connection meant that it was the same ecosystem and that building so many wells would have a detrimental impact on it, on the stromatolites and on the site's rich biodiversity. So, Souza decided to invest all her energy in stopping it. She was soon able to convince Lala to stop buying alfalfa from the area, but her fight to protect the water in Cuatro Ciénegas continued.

"I became public enemy number one for a lot of people," she says. From local cattle companies to so-called "ejidatarios" – community members who have a right to the land – and even hotels.

Her environmentalism came at a cost. For more than a decade, the researcher received threats from the media and ejidatarios, as well as extortion attempts by representatives of local companies and the government who wanted to extract the water.

"I was stepping on the toes of a multi-million-dollar business," she says.

Of all the threats she received, there was one that frightened her. "The rich people of Cuatro Ciénegas, who had made their wealth from alfalfa for the cows, paid local newspapers to tell people that if they saw my truck to throw rocks at me," she explains, adding that this led to a demonstration of stone-laden ejidatarios, threatening to assault her.

In 2020, Souza decided to close one of the canals to prevent further extraction of water from Cuatro Ciénegas. A group of ejidatarios arrived with machetes in hand and beat her colleagues. Souza was saved because she hid in her truck.

"That's when my life was in danger. They didn't use the machetes against my friends, but they did beat them and used the machetes to destroy the work we had done."

However, Souza says her environmental activity, together with her scientific work, has paid off. Although alfalfa planting continues, Cuatro Ciénegas has gained visibility

and foundations such as Lala's and Carlos Slim's, Mexico's richest man, have invested in protecting the site.

'CHILLING ENVIRONMENT'

"Threats to scientific freedom … but also threats to the responsible practice of science, are rising globally," says Vivi Stavrou, executive secretary of the committee for freedom and responsibility in science, at the International Science Council (ISC).

These threats take various forms, according to Stavrou, ranging from censorship to the environment becoming "more chilling" for scientists to express themselves and publish their research.

"It can stretch to actual threats to the freedom of the scientists themselves … not being able to get a visa, not being able to travel … to scientists being taken to court because of their research, to people being jailed – and we've had instances where people have been killed," she adds.

Threats to scientists doing environmental research are increasingly common, says Stavrou, "particularly when it's got to do with environmental change".

"In particular, Latin America and the Caribbean, it's a very dangerous place to be a scientist," she says.

Rodrigo Medellín is a researcher at the Institute of Ecology at the National Autonomous University of Mexico who studies bats. His fieldwork consists of visiting caves, usually at night, to set up nets and observe their activity.

Medellín told SciDev.Net that for more than a decade, since former Mexican President Felipe Calderón started a war against drug trafficking in 2006, his scientific work has been significantly affected by organised crime.

Many of the caves he visits are located near sites where poppy or marijuana is planted, or along routes used for smuggling drugs to the US.

Park rangers in the El Pinacate reserve in Sonora, in the north of the country, often warn the researcher to avoid certain caves and last year he suspended a planned visit after one such warning.

"The rangers told me: 'Don't come, it's horrible, they have killed tourists … they have been threatening people, they have beaten local ejidatarios'."

Medellín takes these warnings very seriously because he knows that being a scientist does not make him immune to aggression.

[While conducting research in the West Philippine Sea,] a Chinese coastguard boat tailed us, which in turn was followed by a large Chinese ship. More Philippine coast guard vessels are needed to protect Filipino scientists doing their work in the area.

JONATHAN ANTICAMARA, Biology Professor, University of the Philippines-Diliman

In July 2023, Gabriel Trujillo, a young botanist studying for his doctorate at the University of Berkeley, US, was murdered by criminal groups while collecting medicinal plants in the mountains of Sonora, an area disputed by different drug cartels.

In 2020 when Medellin and his students were doing fieldwork in the Juxtlahuaca Caves in Guerrero, in the southwest of the country, they too came face to face with armed men, demanding to know what they were doing.

They escaped unscathed, but Medellin says: "Organised crime has definitely impacted us.

"We are not as free to move around as we were 15 or 20 years ago. Today you have to be extremely careful."

WOMEN AT RISK

Colombian researcher Ivonne Garzón Orduña is a curator of the national insect collection at the Autonomous University of Mexico's Institute of Biology, where she dedicates her time to documenting the country's diversity of moths.

Like Medellín, Orduña visits nature reserves at night, since the moths' activity starts at 6pm and lasts until dawn. Mostly accompanied by other female students, she is acutely aware of the risks she faces, in a country where between nine and ten women are killed every day, according to Amnesty International.

"Being out in the field in the dark of night makes me feel like I'm at risk," she says. "I always think, at what moment can something happen to us? I try to go with the [university] vans to make it as official as possible, but the perception of risk is permanent."

Once, when she was doing fieldwork in Ajusco, a national park in Mexico City, Orduña was interrogated by strangers about what she was doing there. "At midnight, in the middle of nowhere, this kind of intimidation makes you say: 'I'm not going back to this place.'"

Prompted by these experiences, Orduña has become a great planner. "I plan a lot where we're going to go, where we're going to stay, where we're going to eat. I always contact someone local. Nothing is left to chance."

DEATH THREATS

In 2022, the murder of Brazilian indigenous expert Bruno Araújo Pereira and British journalist Dom Phillips during a trip to the Javari Valley, one of Brazil's largest indigenous lands, in the Amazon, gained worldwide media attention. The case was symptomatic of the violence and uncertainty faced by Indigenous peoples, riverside communities and others, including researchers.

Pedro Rapozo is a professor at the Amazonas State University in Tabatinga, Amazonas state, on Brazil's triple border with, Colombia, Peru and Venezuela.

Four times threatened with death, Rapozo was shot in 2019, but survived because he was wearing a bulletproof vest.

His research into socio-environmental conflicts in protected land territories literally puts him in the firing line. He is also involved in teaching and outreach in indigenous communities and is a member of a technical panel on traditional communities at the Federal Public Prosecutor's Office, which analyses cases involving litigation, violence and violations of indigenous peoples' rights.

These protected territories are being heavily impacted by groups involved in cocaine production, says Rapozo. According to the Brazilian Forum of Public Security, Tabatinga is one of the main entry points for cocaine in Brazil and smuggling has been significantly increasing – from 38.5 tonnes per year between 2013 and 2017 to 86.6 tonnes per year from 2018 to 2023.

Drug traffickers, says Rapozo, are not only interested in cocaine, but also exploit natural resources within these territories.

"There is a search to expand their profits in the region through activities such as illegal mining, the trafficking of fishes and turtles, the illegal exploitation of Indigenous labour, and timber," Rapozo explains.

"Perhaps the biggest challenge is the fact that in this triple border region there is the entire federal, municipal and state public security apparatus, but 100 kilometres away these territories are totally unattended – this combined with this high socio-economic vulnerability," he adds.

ACADEMIC FREEDOM DECLINING

Stories of this kind are numerous in Latin America. But academic freedom is under threat globally, according to the Academic Freedom Index (AFI).

The study of 179 countries, shows that academic freedom is in decline in 23 countries and increasing in only ten countries. It found that 3.6 billion people now live in countries where academic freedom is completely restricted.

The index looks at risks ranging from non-academic actors meddling in university programmes to further personal or political agendas, to constraints on scientists' ability to communicate their research due to restrictions on civil liberties.

"The latest findings indicate that academic freedom remains very low in countries primarily in East and Southeast Asia, as well as in the Middle East and North Africa region," says Angelo Vito Panaro, a postdoctoral researcher working on the AFI at the University of Erlangen-Nuremberg's FAU Institute of Political Science, who worked on the index.

However, the decline in academic freedom is "not significantly more pronounced in low- and middle-income countries compared to high-income ones", stresses Panaro.

"Interestingly, our studies show a correlation between rising polarisation and declining academic freedom," he explains, citing as examples countries where populist leaders have come to power in recent years, such as the US, Italy and Hungary.

Nevertheless, low- and middle-income countries are being buffeted by multiple crises, which can exacerbate existing tensions and heighten risks for scientists.

"We live in an era of polycrisis," adds Stavrou, of the ISC, "where there's a convergence of environmental crisis, extreme inequalities within and between countries, wars and humanitarian emergencies, the pandemic and various other factors … that threaten scientists as individuals but also threaten the existence of scientific institutions and systems."

GAZA CONFLICT

Perhaps nowhere is this more apparent than in Gaza. Here, the conflict has put the lives of every citizen at risk. However, a number of scientists appear to have been targeted specifically because of their work.

Sufian Tayeh, former president of the Islamic University of Gaza, was not involved in any political activity, according to those who knew him, but he lost his life in the war that has been raging since October 2023, for no reason other than being a physicist.

Tayeh, his wife and children were assassinated in a missile attack that targeted their home. All the buildings of the university that he ran were destroyed, under the pretext that they were being used as a camp for producing weapons and training Hamas intelligence operators. This was the explanation given in a statement by the Israeli Defence Forces, but rejected by everyone who dealt with Tayeh.

A professor in theoretical physics and applied mathematics, Tayeh was a winner of the Abdul Hameed Shoman Award for Arab researchers and was appointed in early 2023 to be UNESCO Chair in Physics, Astrophysics and Space Sciences in Palestine.

Anas Alkanoo, a physics lecturer at the university who was close to

Tayeh, tells SciDev.Net: "He was not known for any party or political affiliation. He was an independent man who devoted his life and effort to science, and from within the besieged Gaza Strip he was able to achieve scientific successes that made him one of the most prominent scientists in his field."

Alkanoo also struggled to carry out his work as a scientist in Gaza. He was preparing his doctoral thesis in physics between the Islamic University of Gaza and the Malaysia University of Science and Technology, but was unable to implement the practical side of it, lacking the materials he needed. Israeli forces have banned chemicals from entering Gaza, in case they are used in manufacturing weapons. Alkanoo says the silver nitrate he needed for his thesis around the manufacturing of silver nanowires was among the list of prohibited items.

"The war is currently being fought with science," he concludes. "The occupation forces do not want anyone to emerge … who can confront them with science."

The situation is similarly bleak for scientists in Iraq, afflicted by unrest and anxiety since the eight-year war with Iran in the 1980s. The subsequent harassment of scientific researchers, and restrictions imposed on importing materials for their work, prompted many to emigrate.

Nasser Al-Rawi began his career in a military manufacturing research centre, specialising in laser manufacturing. He tells SciDev.Net: "With the outbreak of the Iran-Iraq war [in 1980], and the assassinations that accompanied it of scientists working in the Iraqi nuclear programme, the climate was not suitable for scientific research. So, I travelled to Libya, and worked there for five years, then moved to Malaysia."

As such, Al-Rawi escaped the US-led Iraq war of 2003 and the subsequent reign of terror by Islamic militants. He returned to Iraq last year and is now head of the department of laser engineering and optoelectronics at Dijlah University in Baghdad.

However, one of his peers still lives with the memories of his experiences in the city of Mosul, when it was controlled by the Islamic State organisation, known as ISIS.

The researcher, who asked not to be named for fear of reprisals, says: "Things are somewhat calm now, but in the past this terrorist organisation targeted the educated in general, and scientific researchers in particular, and sought to obliterate everything related to science and learning, by occupying schools and universities and turning them into barracks."

He adds: "Before this invasion, scientific research was already suffering, due to the mass migration of researchers and academics during the sanctions period in the 1990s, which was repeated on a larger scale during the period of the US-led invasion in 2003.

"We are now trying to recover and get rid of the painful memories of the recent past to save what can be saved."

The targeting of researchers, past or present, is not surprising, according to Mazin Qumsiyeh, director and founder of the Palestine Museum of Natural History and the Palestine Institute for Biodiversity and Sustainability at Bethlehem University, Palestine.

Qumsiyeh tells SciDev.Net: "Science and education are among the most important components of development, and the goal of any conflicting forces, even if the conflict is civil, is to deprive the other party of this advantage, therefore scientific researchers will always be the victims of any conflict."

He believes, however, that technology can help protect scientists, enabling them to communicate with each other and learn remotely in times of conflict.

TENSIONS AT SEA

In the Asia Pacific region, territorial disputes, rather than outright conflict, are leading to increasing risks for scientists.

The area of water known as the West Philippine Sea, the Philippine part of the disputed South China Sea, is a vital and urgent area for scientific research, but it is also entangled in geopolitical tensions, posing significant personal security risks for researchers working in the region.

The area, officially designated as part of the Philippines' exclusive economic zone, recognised by a 2016 arbitration ruling of the UN's Convention on the Law of the Sea, is located within the South China Sea, a semi-enclosed sea in the western Pacific Ocean.

The South China Sea itself is estimated to contain 190 trillion cubic feet (5.4 trillion cubic metres) of natural gas and 11 billion barrels of untapped oil, according to the US Energy Information Administration.

Islands in the Sea are claimed variously by Vietnam, Taiwan, Brunei, Malaysia, Indonesia, the Philippines and China. However, China's so-called "nine-dash line", an imaginary line that covers islands and adjacent waters in the entire maritime area, essentially claims portions of the exclusive economic zones of the Southeast Asian countries.

Left unchallenged, China would have control not only of the natural resources but the entire maritime area. Between 2013 and 2015, China built artificial islands near the Philippines' claimed areas.

On 28 September, the naval and air forces of Australia, Japan, New Zealand, the Philippines and the US conducted naval exercises, referred to as Maritime Cooperative Activity, in the West Philippine Sea, to highlight international cooperation in one of the world's busiest maritime highways.

A few days before, the Armed Forces of the Philippines reported

that the number of Chinese ships in one of the submerged ridges in the area, the Escoda shoal, had increased to a "record-high" 82, including 11 warships. It said Chinese research vessels were seen near the coastline of Palawan, an archipelagic westernmost province of the Philippines, rich in diverse flora and fauna.

According to Jonathan Anticamara, a biology professor at the University of the Philippines-Diliman, working in the West Philippine Sea is life-threatening. His group went to the Escoda shoal in June to conduct a survey to assess the status of corals.

"A Chinese coastguard boat tailed us, which in turn was followed by a large Chinese ship," he tells SciDev.Net, adding that initially, they could not get into the water to do their work as the Chinese coastguard was trying to bump their boat.

Later, a Philippine coastguard boat blocked the Chinese coastguard's boat, allowing Anticamara to slip into the water. However, the scientist says he and his team could not go as far as they needed, fearing they wouldn't be protected by the Philippine coastguard in deeper waters.

"More Philippine coast guard vessels are needed to protect Filipino scientists doing their work in the area," Anticamara urges.

According to the researcher, their survey focused on the shallow waters of the shoal, around ten metres deep, where fish species diversity is most concentrated. Beyond 12 metres, marine diversity significantly decreases.

Anticamara explains that he and his team decided to conduct the survey despite the risks, as currently there is no diversity report on the Escoda shoal. He believes a complete assessment in the West Philippine Sea is urgent as many marine species there are dying.

In March 2024, another group of Filipino scientists in Thitu island, also known as Pag-asa island, were harassed by a Chinese helicopter, according to the Bureau of Fisheries and Aquatic Resources (BFAR), an agency under the Philippine Department of Agriculture.

According to BFAR, the Chinese helicopter got as low as 50 feet (15 metres) from the surface, for about ten minutes, with some of the scientists sustaining minor injuries due to the strong wind and debris from the hovering chopper.

For some experts, diplomacy is the best option in the face of such threats.

At a symposium organised by the University of the Philippines Los Baños School of Environmental Science and Management in June, Ben Malayang III, emeritus professor at Silliman University, emphasised the urgent need for cooperation in protecting the shared environmental heritage of the West Philippine Sea.

Malayang explained that while territorial disputes often create "friend-foe" dynamics, these tensions can be mitigated through collaboration among regional stakeholders, focusing on the shared responsibility to preserve the region's vital marine ecosystem.

The ISC carries out diplomatic work and provides information for legal cases for members in danger. The majority of this work is not public, at the request of the scientists themselves.

PROTECTING SCIENTISTS

Whether scientists choose to stay in their country, despite the risks they face, or need help to leave, international support is available.

UK-based charity Cara, the Council for At-Risk Academics, describes itself as a "rescue mission" for academics who need urgent help escaping discrimination, persecution, violence or conflict. It also works to support those who choose to stay in their home countries despite the dangers.

Science in Exile is a global initiative which also aims to help refugee scientists, through advocacy, support, networking and research activities.

There are several organisations which can support scientists in peril but "all of them are underresourced" says Peter McGrath, coordinator of the InterAcademy Partnership, one of the partner organisations of Science in Exile.

He highlights the need for awareness "at the highest level" in order to establish effective support structures "before the next crisis happens".

McGrath says risks to scientists have always been there, but in the current climate "there is always another crisis that we have to deal with".

The ISC carries out diplomatic work and provides information for legal cases for members in danger. The majority of this work is not public, at the request of the scientists themselves, says Stavrou.

For Stavrou, the international science community has a responsibility to step up to help those at risk.

"It's our community. We have an obligation to look at supporting, protecting and strengthening the resilience of the scientific community," she says.

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Source: https://www.eco-business.com/news/the-scientists-who-risk-it-all-for-research/

A school of trevally fish in the oceans of Palau. In Palau, marine protected areas safeguard biodiversity, support sustainable fisheries and bolster the tourism industry.
Image: The Ocean Agency

THE WORLD NEEDS OCEAN-BASED CLIMATE SOLUTIONS

Countries which govern half the world's territorial oceans have yet to integrate ocean-focused solutions into their nationally determined contributions, or NDCs, due for an update by February 2025, writes **Ilana Seid**

Following the recent 2024 United Nations Climate Change Conference (COP29) in Baku, we are confronted with one pressing question: What's next? With countries set to submit their updated nationally determined contributions (NDCs) under the 2015 Paris climate agreement early next year, the world has an opportunity – and a responsibility – to take transformative action to address the climate crisis. The ocean must be central to this effort.

Nobody understands this better than small island developing states (SIDS) like Palau. For us, climate policy is not some abstract debate about hypothetical future risks; it is a fight for survival. Already, coral reefs are undergoing bleaching; storms are becoming increasingly frequent and destructive; and droughts are undermining food security. Rising sea levels threaten not just our land, but also our culture, our way of life, and our very existence.

To date, international support for climate action has fallen far short of meeting developing countries' needs. SIDS collectively receive less than two per cent of global climate finance, even as they oversee 30 per cent of the world's territorial waters. It is a striking imbalance, especially given the ocean's enormous untapped potential to help mitigate climate change.

The ocean is our planet's largest carbon sink, absorbing 25 per cent of all carbon dioxide emissions and a staggering 90 per cent of the excess heat generated by a warming atmosphere. According to a 2023 report, ocean-based climate solutions can get us as much as 35 per cent closer to our emissions-reduction targets for 2050, on a pathway that limits the global temperature increase to 1.5 degree Celsius. And mitigating climate change is just the beginning; a healthy ocean plays a pivotal role in creating sustainable livelihoods for vulnerable communities worldwide.

Consider nature-based solutions like the restoration of mangroves, seagrasses, and coral reefs. Beyond sequestering carbon, these ecosystems act as natural defenses against rising seas and extreme weather, and they form the basis of local livelihoods. In Palau, marine protected areas safeguard biodiversity, support sustainable fisheries, and bolster the tourism industry.

So far, the ocean – including the ecosystems it supports – has largely been treated as an afterthought in global climate strategies, sidelined in favor of more visible priorities like renewable energy and curbs on emissions. The High Level Panel for a Sustainable Ocean Economy has revealed that many of its member countries – which together govern half the world's territorial oceans – have yet to integrate the ocean fully into their NDCs.

This omission represents a vital opportunity, which countries should seize as they prepare their NDC submissions before the February deadline. Putting the ocean at the center of our climate strategies would transform it from a silent victim of global warming into an active force for mitigation and resilience-building.

The Blue Economy and Finance Forum (BEFF) takes place in June, one of the "special events" that will set the stage for the third UN Ocean Conference in Nice, France. The BEFF aims to unlock financing for ocean-based solutions, particularly biodiversity-positive investments that simultaneously support economic development and climate goals. But, as we saw at COP29, public budgets are already stretched thin. Mobilising private capital alongside public investment is thus essential to drive meaningful change.

To understand why, look no further than the shipping industry, which emits more carbon than all but six countries. Critical pieces of the net zero puzzle are already in place for the industry. Shipping companies are planning their low-carbon transitions. The technologies they need – in particular, "green fuels" like green methanol and ammonia – have been developed. And producers are ready to increase output, while continuing to innovate. And yet scaling up production has proved difficult, because investors still view crucial green technologies as too risky.

This mismatch between ambition and funding underscores the need for creative financing solutions, such as government-backed guarantees or blended-finance instruments. Fortunately, the New Collective Quantified Goal on climate finance, agreed at COP29, offers an opportunity to set ambitious targets and leverage innovative mechanisms to unlock private investment at scale.

Despite its disappointments, COP29 delivered another reason for cautious optimism: the discussions taken there reflected growing recognition that ocean action is climate action. This idea, which began gaining traction in 2019 during the Ocean and Climate Change Dialogue at COP25, has evolved into a powerful movement. As a result, momentum is building behind ocean-based climate solutions.

But harnessing this momentum to deliver measurable action – such as the introduction of more marine protected areas covering mangroves and seagrass meadows or scaling up the decarbonisation of the shipping industry – will require collaboration across sectors and borders. And it will require far more financing. As we look ahead to the BEFF and beyond, we must make one thing crystal clear: investing in the ocean is investing in our collective future.

Ilana Seid is Palau's ambassador to the United Nations, sherpa co-chair of the High Level Panel for a Sustainable Ocean Economy, and co-chair of the steering committee for the Blue Economy and Finance Forum.
Source: https://www.eco-business.com/opinion/the-world-needs-ocean-based-climate-solutions/

A farmer ploughs through hardened soil on a dry rice field in rural Indonesia. Extreme weather damages crops, spoils harvests, and drives up food prices, and its impact is growing more pronounced as heatwaves, droughts, and floods become more frequent and intense.
Image: CC BY-SA 2.0 via IFPRI Flickr

THE CLIMATE CRISIS IS ALSO AN INFLATION CRISIS

Rising prices and climate change are closely linked. Rather than being treated solely as an environmental issue, climate change must be central to economic policy, writes **Monica Araya** and **Saliem Fakir**

Global inflation in recent years has pushed the prices of food, energy, and basic goods to unprecedented levels. As a result, the rising cost of living has dominated political discussion around the world, but especially in G20 countries. Ahead of this year's presidential election

in the United States, for example, 41 per cent of Americans cited inflation as their top economic issue.

High inflation risks overshadowing another urgent crisis: global warming. But rising prices and climate change are closely linked. Extreme weather damages crops, spoils harvests, and drives up food prices, and its impact is growing more pronounced as heatwaves, droughts, and floods become more frequent and intense. These events also disrupt supply chains and energy production, pushing up the price of other essential goods.

Climate-induced inflationary pressures are especially acute in Africa and Latin America, where food accounts for a significant share of household spending. For example, an extensive drought exacerbated by El Niño raised the price of staples in Malawi, Mozambique, Zambia, and Zimbabwe earlier this year, creating a hunger crisis. By contrast, households in wealthier countries tend to spend a smaller share of their income on food and are thus better insulated.

Discussions about climate change often overlook its economic toll on vulnerable populations and how it deepens inequality, focusing instead on green growth and emissions reductions. But as inflation increasingly disrupts economic stability, this toll can no longer be ignored. Shifting weather patterns have raised the prices of oranges in Brazil, cocoa in West Africa, and coffee in Vietnam. A recent study by the Potsdam Institute for Climate Impact Research and the European Central Bank estimates that rising temperatures could drive up food inflation by 3.2 percentage points per year, with overall inflation increasing by 1.18 percentage points annually by 2035.

Rather than being treated solely as an environmental issue, climate change must be central to economic policy. Fiscal and monetary authorities should incorporate both immediate and long-term climate-related risks into their inflation forecasts and policies – as they already do with the "transition risks" of shifting to a low-carbon economy. Some institutions have begun to adapt. The South African Reserve Bank has acknowledged the importance of understanding climate risks. Since 2018, the Central Bank of Costa Rica has integrated the impact of global warming into its economic models.

Central banks and finance ministries should also work with climate organisations to create practical solutions that help cushion economies from the interrelated shocks of extreme weather, soaring inflation, and food insecurity. For example, the African Climate Foundation (where one of us works) has developed Adaptation and Resilience Investment Platforms (ARIPs), which use advanced analytics that combine climate and weather data, biophysical models, and economy-wide models to facilitate investment and policy prioritisation – a more comprehensive approach to building resilience.

The ACF used an ARIP in Malawi last year, after the country was devastated by Cyclone Freddy, the longest-lasting tropical cyclone ever recorded. Using this financial tool enabled policymakers to identify lasting solutions that would mitigate the economic damage caused by the cyclone while protecting key industries and strengthening financial stability.

Other climate think tanks are pursuing similar goals. Iniciativa Climática de México is pushing policymakers to consider climate risks in economic planning, while the Institute for Climate and Society in Brazil has called for social-protection plans and climate-sensitive policies to shield low-income communities from the economic consequences of extreme weather.

Equally important is regional collaboration, which would allow countries in Africa and Latin America to develop and share economic policies that are specifically tailored to their climate vulnerabilities and support the most exposed communities. Initiatives like the Inter-American Development Bank's Regional Climate Change Platform of Economy and Finance Ministries can serve as a blueprint for such efforts.

At the global level, greater coordination between climate and economic institutions is crucial. Tools like the European Union's Carbon Border Adjustment Mechanism highlight the need for careful policy design to mitigate adverse effects – in this case, higher costs for consumers in developing countries. Brazil, as the host of next year's BRICS Summit and United Nations Climate Change Conference (COP30), and South Africa, as the current G20 president, have a unique opportunity to redefine the global economic agenda, championing policies that address the twin crises of inflation and global warming.

Failure to act collectively and decisively could deepen inequality, erode economic stability, and jeopardise climate goals. But if policymakers develop innovative solutions that bridge the gap between climate and economic strategies, they can reduce the immediate risks of extreme weather and foster long-term stability and resilience. As both inflation and the planet heat up, the need for integrated, equitable policies has never been more urgent.

Mónica Araya, Distinguished Fellow at ClimateWorks, is Director of the Governing Board of the Natural Resource Governance Institute. Saliem Fakir is Founder and Executive Director of the African Climate Foundation.

(Source: https://www.eco-business.com/opinion/the-climate-crisis-is-also-an-inflation-crisis/)

The research reveals that multi-year droughts have increased in size, temperature, dryness and duration. The global land area affected by this kind of drought increased at a rate of 49,279 km2 per year during that time – equivalent to a size larger than Switzerland per year.
Image: ILO Asia-Pacific, CC BY-SA 3.0, via Flickr.

'MULTI-YEAR' DROUGHTS HAVE BECOME MORE FREQUENT, DRIER AND HOTTER OVER PAST 40 YEARS

Droughts spanning multiple years have become drier, hotter and more frequent over the past 40 years, according to new research.

The study, published in Science, finds that the global land surface affected by these extreme events has expanded at a rate of nearly 50,000 square kilometres (km2) per year in the past four decades – an area larger than Switzerland each year.

The authors identify multi-year droughts – which can last from years to decades – that occurred around the world between 1980 and 2018.

They find that multi-year droughts can cause significant declines in vegetation in ecosystems such as grasslands. These impacts can also translate into severe impacts for humans, including water scarcity.

Study author Dr Dirk Karger, a senior researcher at the Swiss Federal Research Institute (WSL), tells Carbon Brief:

"Everybody was talking about droughts, [that they] will be more [frequent] with climate change, but there [was] no clear database where we could look. We finally have a good baseline of what is happening…[and] provide a new way of thinking about the impact the [multi-year droughts have]."

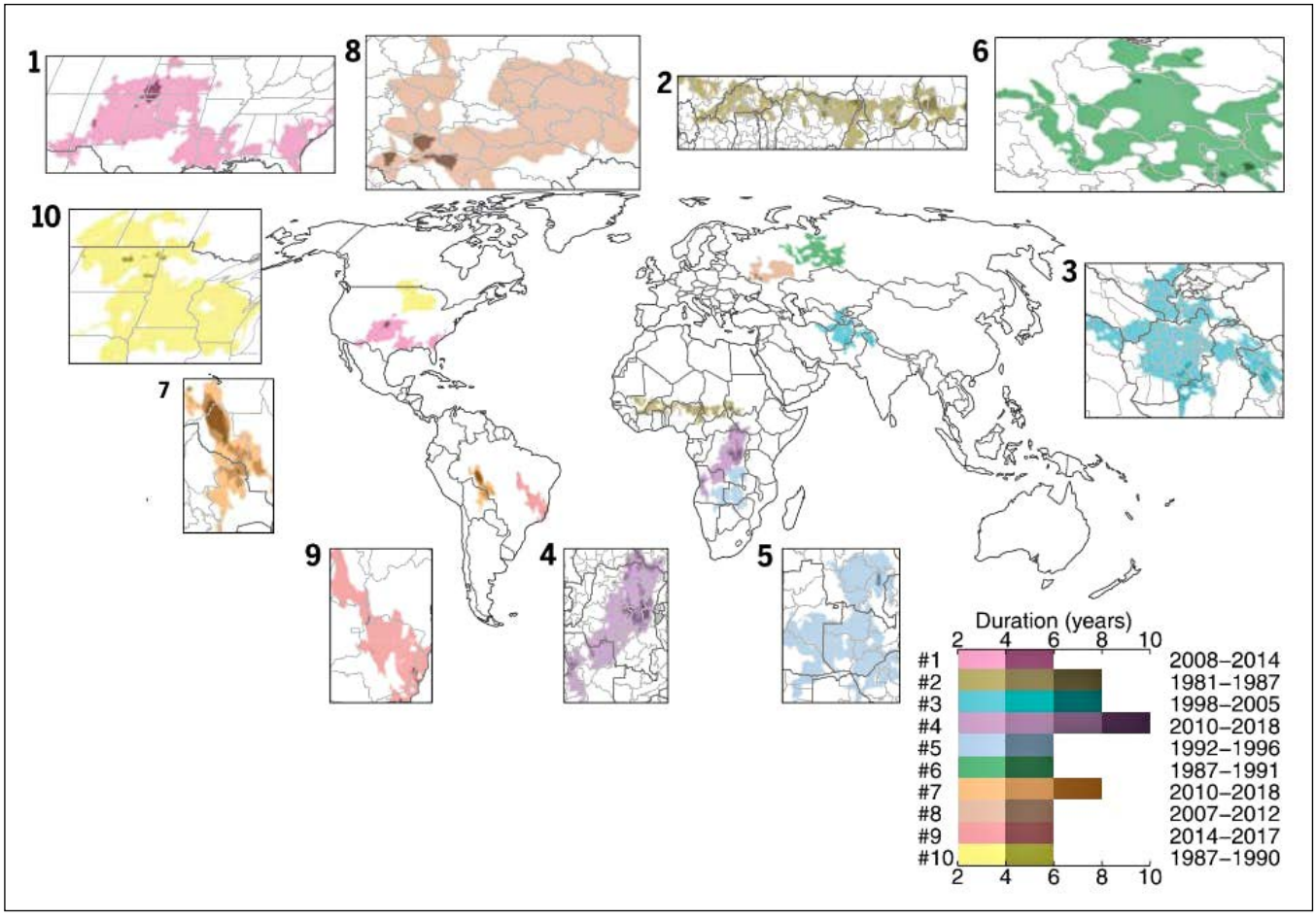
Long-lasting drought

"Multi-year" droughts – those lasting at least two years and for as long as decades – can have dramatic impacts on nature and societies. These long-lasting events can deplete soil moisture and leave rivers, lakes and reservoirs parched. This, in turn, can result in "devastating impacts", such as massive crop failures, tree mortality or reduced water supply, according to the study.

In recent years, multi-year droughts have occurred around the world, including Chile, the western US and Australia. For example, a 2015 study found that the so-called "megadrought" that persisted in Chile from 2010 to 2019 led to a "marked decline in water reservoirs and an extended forest fire season".

The new study maps the distribution of multi-year drought events between 1980 and 2018. It identifies droughts by looking at a "drought index" based on changes in rainfall and potential evapotranspiration, which measures the amount of water that escapes the soil and plants into the atmosphere.

The researchers also rank the drought events by their severity –



Occurrence of the 10 most severe multi-year droughts between 1980 and 2018. Each inset map shows one of these events, ranging from 1 (most severe) to 10 (least severe). On the bottom-right corner, the chart displays the number of the event (y-axis), its duration (x-axis) and the period of occurrence (distinguished by colour). *Source: Chen et al. (2025)*

based on a combination of the extent and duration, along with the magnitude of the drought index. Then, they use the index to estimate the impact of multi-year droughts on global vegetation.

They identify more than 13,000 multi-year drought events during the four-decade study period, spanning every continent except Antarctica. The map below shows the location and characteristics of the 10 most severe events, with the colours representing each individual drought and its length.

The longest multi-year drought occurred in the eastern Congo basin. It lasted for almost a decade, from 2010 to 2018, and affected an area of almost 1.5m square kilometres (km2). The study finds that the most affected ecosystems by these extreme events are temperate grasslands. However, not all multi-year droughts result in significant damage to ecosystems.

In the humid tropics, which are home to rainforests such as the Amazon, the lack of rainfall is not strong enough to diminish vegetation. This suggests that plants in those regions might have a "greater resistance" to drought conditions, the authors write.

Boreal forests in the far-northern hemisphere and tundra ecosystems also had a "minor response" to these events. The authors say this is because their vegetation productivity is more dependent on temperature than on the presence or absence of rainfall.

The drought with the most severe vegetation impacts occurred in Mongolia from 2000 to 2011 and reduced vegetation "greenness" by almost 30 per cent.

For Karger, it is difficult to pinpoint the strongest multi-year drought ever because it depends on what aspect is considered: the drought that had the largest extent or the one that lasted the longest. He continues:

"With our database we can easily answer any of these questions, it's just a matter of what we sought for, since we provide that open source and open data".

Drivers of droughts

The research reveals that multi-year droughts have increased in size, temperature, dryness and duration.

The global land area affected by this kind of drought increased at a rate of 49,279 km2 per year during that time – equivalent to a size larger than Switzerland per year.

The factors behind the intensification of multi-year droughts are increased potential evapotranspiration, decreased rainfall and rising temperatures, the study says.

The researchers note that during multi-year drought events, the "precipitation deficit" – the difference in the amount of rain compared to a baseline over a certain period and region – has surged over time.

For the 10 most severe multi-year droughts, the precipitation deficit has increased, on average, by 7mm per year over nearly four decades.

At the same time, the temperature during these events has increased by 0.26-0.35C per decade.

The study attributes the higher temperatures during multi-year droughts to climate change, noting that the warming "align[s] well" with global changes. It also notes that the years with the largest areas under multi-year drought have followed the El Niño events of 1998, 2010 and 2015.

The longest multi-year drought occurred in the eastern Congo basin. It lasted for almost a decade, from 2010 to 2018, and affected an area of almost 1.5m square kilometres (km2).

Dr Maral Habibi, a researcher at the University of Graz, in Austria, and who was not involved in the study, tells Carbon Brief:

"The study clearly illustrates how rising temperatures amplify drought through increased evapotranspiration, precipitation deficits and vicious feedback loops (such as reduced cloud cover exacerbating heat)."

'More regular' multi-year droughts

The research says that the most severe multi-year droughts identified in the study "represent valuable case studies to prepare for similar events that may occur more regularly in the 21st century". It also says that analysing droughts at a global level, rather than focusing on a single drought event, "paves a more realistic way to develop adequate and fair mitigation strategies".

Dr Ruth Cerezo-Mota, a researcher at the National Autonomous University of Mexico (UNAM) who was also not involved in the study, tells Carbon Brief that the world needs more data, including high-quality and continuous observations, and more investment in science to "understand these dynamic processes".

Habibi agrees on the need for "enhanced monitoring tools and predictive climate models". She adds that "investments in AI-driven drought forecasting and cross-border water resource management are also vital" to "mitigate and adapt to the challenges of a warming, drying world".

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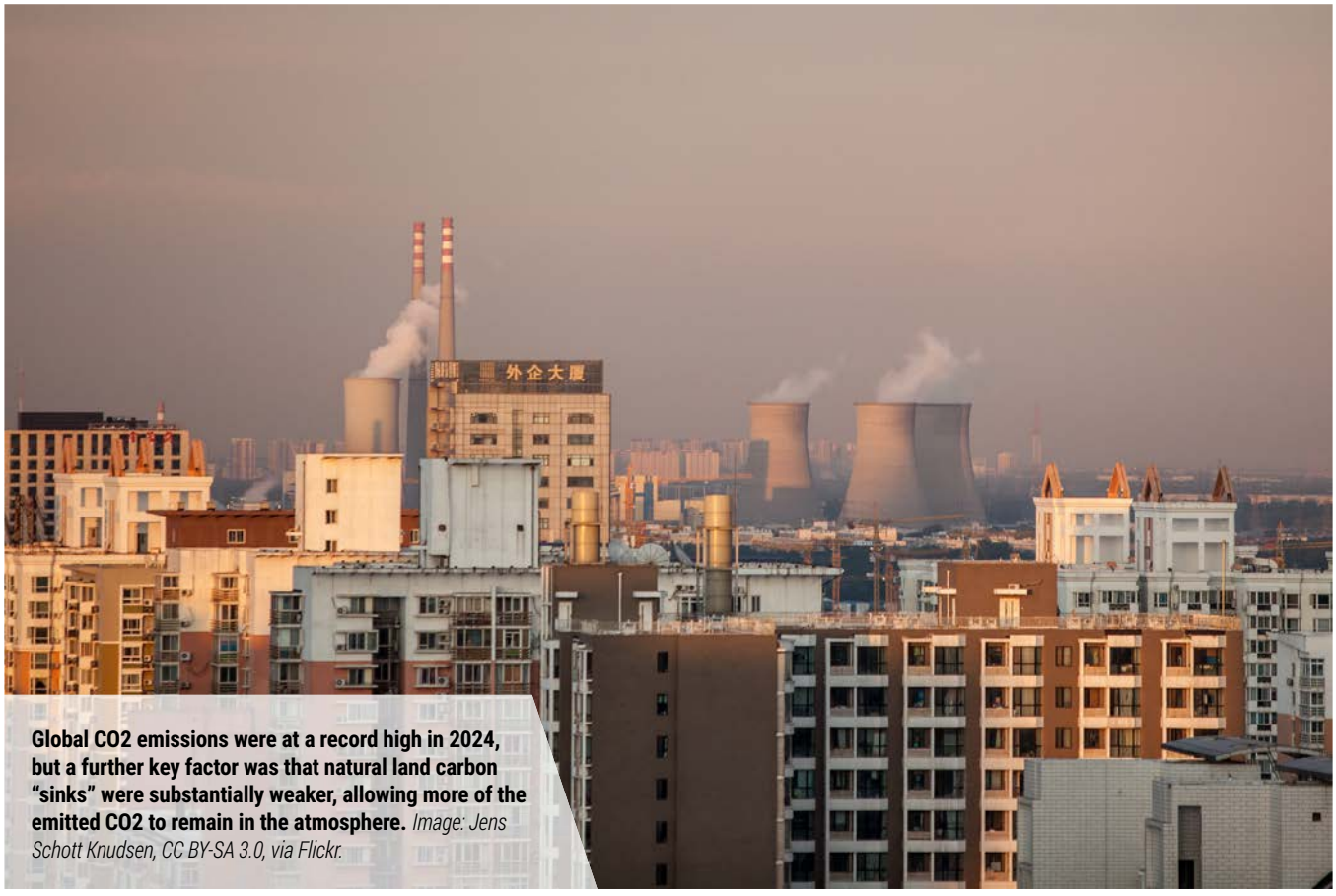
(Souce:https://www.eco-business.com/news/multi-year-droughts-have-become-more-frequent-drier-and-hotter-over-past-40-years/)



Global CO2 emissions were at a record high in 2024, but a further key factor was that natural land carbon "sinks" were substantially weaker, allowing more of the emitted CO2 to remain in the atmosphere. *Image: Jens Schott Knudsen, CC BY-SA 3.0, via Flickr.*

MET OFFICE: ATMOSPHERIC CO2 RISE NOW EXCEEDING IPCC 1.5°C PATHWAYS

The rate at which atmospheric CO2 is increasing is now outpacing the pathways set out by the Intergovernmental Panel on Climate Change (IPCC) that limit global warming to 1.5C.

This is what the latest data shows from the Mauna Loa observatory in Hawaii, where measurements of CO2 levels in the atmosphere have been collected for more than 60 years.

In 2024, the rise in atmospheric CO2 was one of the fastest on record.

Emissions of CO2 and other greenhouse gases from human activity have so far caused human-caused global warming to reach about 1.3°C above pre-industrial levels.

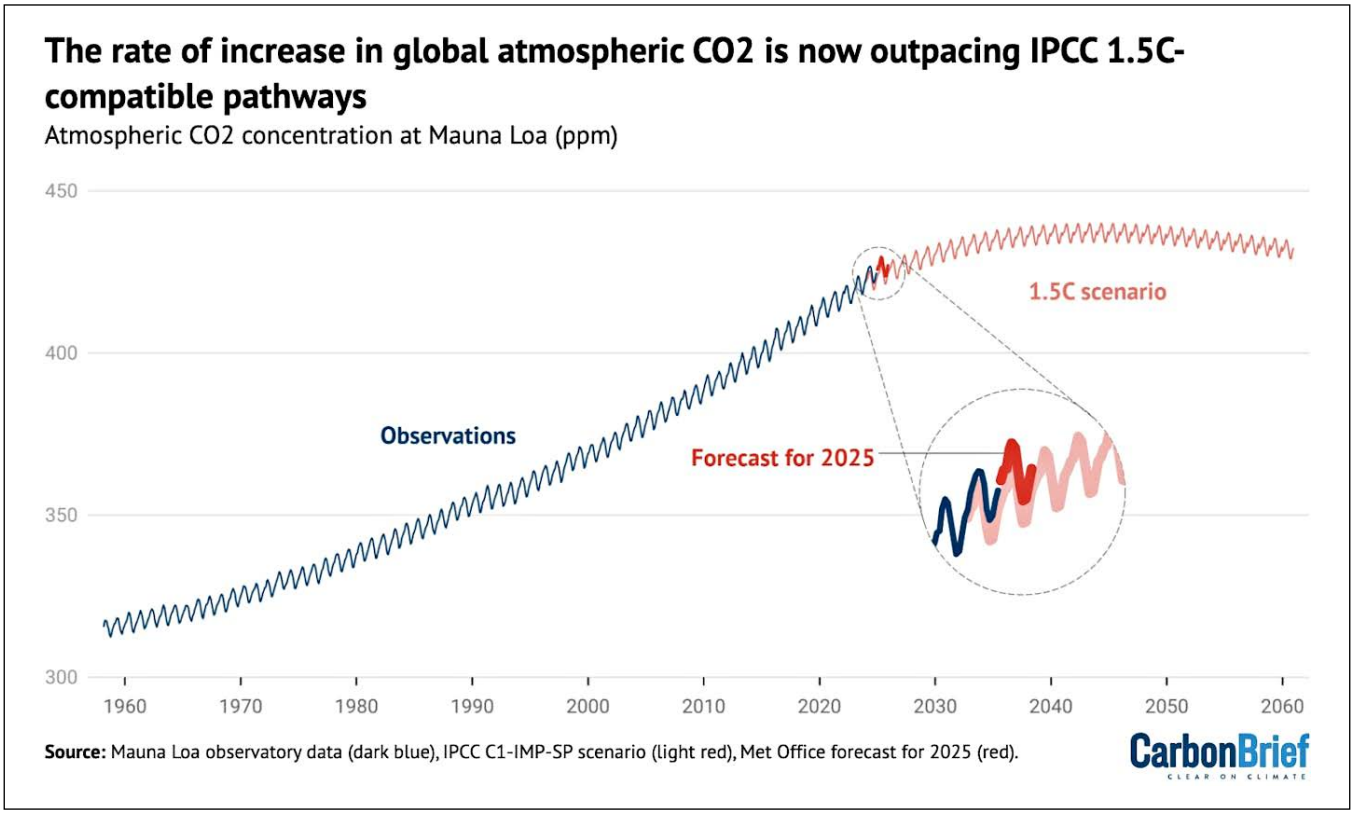
If warming is to be limited to 1.5°C, as set out in the Paris Agreement, the build-up of CO2 and other greenhouse gases in the atmosphere will need to slow to a halt and then go into reverse. And, yet, the rise in atmospheric CO2 concentrations is still showing no signs of slowing.

Pathways to 1.5°C

The third working group report of the IPCC's sixth assessment report (AR6), published in 2022, presented a set of seven "illustrative pathways" that highlight how different mitigation choices across major economic sectors translate into future greenhouse gas emissions and global temperatures. In the three most-ambitious pathways, global warming

Decade	Projected average CO2 rise (ppm/year) in scenarios limiting global warming to1.5C		
	C1-IMP-LD	C1-IMP-REN	C1-IMP-SP
2020s	1.33	1.75	1.79
2030s	-0.14	0.13	0.57
2040s	-0.53	-0.46	-0.7
2050s	-0.65	-0.61	-0.41

Table: Carbon Brief



Monthly CO2 concentrations at Mauna Loa from observations up to 2024 (blue) and the IPCC C1-IMP-SP scenario consistent with limiting global warming to 1.5C (light red). Also shown is the Met Office forecast for 2025 (red).

has a 50 per cent chance of either staying below 1.5°C, or overshooting it by only 0.1°C (for up to several decades) before then returning to below 1.5°C:

- **Shifting pathways (IMP-SP):** Illustrates mitigation in the context of a broader shift towards sustainable development, including by reducing inequality and with a phase-out of fossil fuels.
- **Low demand (IMP-LD):** Illustrates a strong emphasis on energy-demand reductions, and with a phase-out of fossil fuels.
- **Renewables (IMP-Ren):** Illustrates a future with a heavy reliance on renewable energy.

As the table below shows, the build-up of atmospheric CO2 in these three scenarios slows from the 2010s average of 2.41 parts per million per year (ppm/year) to 1.33-1.79ppm/year in the 2020s.

It then slows still further and goes into reverse either in the 2030s or 2040s – in other words, the level of CO2 in the atmosphere actually begins to fall.

Large CO2 rise in 2024

Yet, not only are atmospheric CO2 concentrations still rising, the rate of rise is accelerating.

The build-up of CO2 in the atmosphere has been monitored at the Mauna Loa observatory in Hawaii since 1958.

As illustrated by the iconic Keeling Curve below, the increase has been accelerating over the decades (blue line) due to ongoing emissions of CO2 from burning fossil fuels and changing land use.

So while the curve needs to rapidly bend in the other direction to hold warming to 1.5°C (light red line), the rate of rising CO2 marches onwards and upwards.

The table below sets out decadal averages of the annual rise in CO2 concentrations at Mauna Loa. The first half of the 2020s has seen an average CO2 rise of 2.58ppm/year, which is 44-94 per cent higher than it needs to be to track the IPCC 1.5°C-compatible scenarios.

In fact, the annual rise of 3.58ppm/year between 2023 and 2024 at Mauna Loa was the fastest on record. The global average, which has been monitored by satellite since 2003, also showed a large rise last year – and, at 2.9ppm/year, this was the second largest on record after 2015-16.

(While the rise at Mauna Loa mirrors the global rise over long periods, in the short term it can also be affected by localised effects, such as fires upwind or in the same hemisphere, before the CO2 disperses more evenly across the globe.)

Global CO2 emissions were also at a record high in 2024, but a further key factor was that natural land carbon "sinks" were substantially weaker, allowing more of the emitted CO2 to remain in the atmosphere.

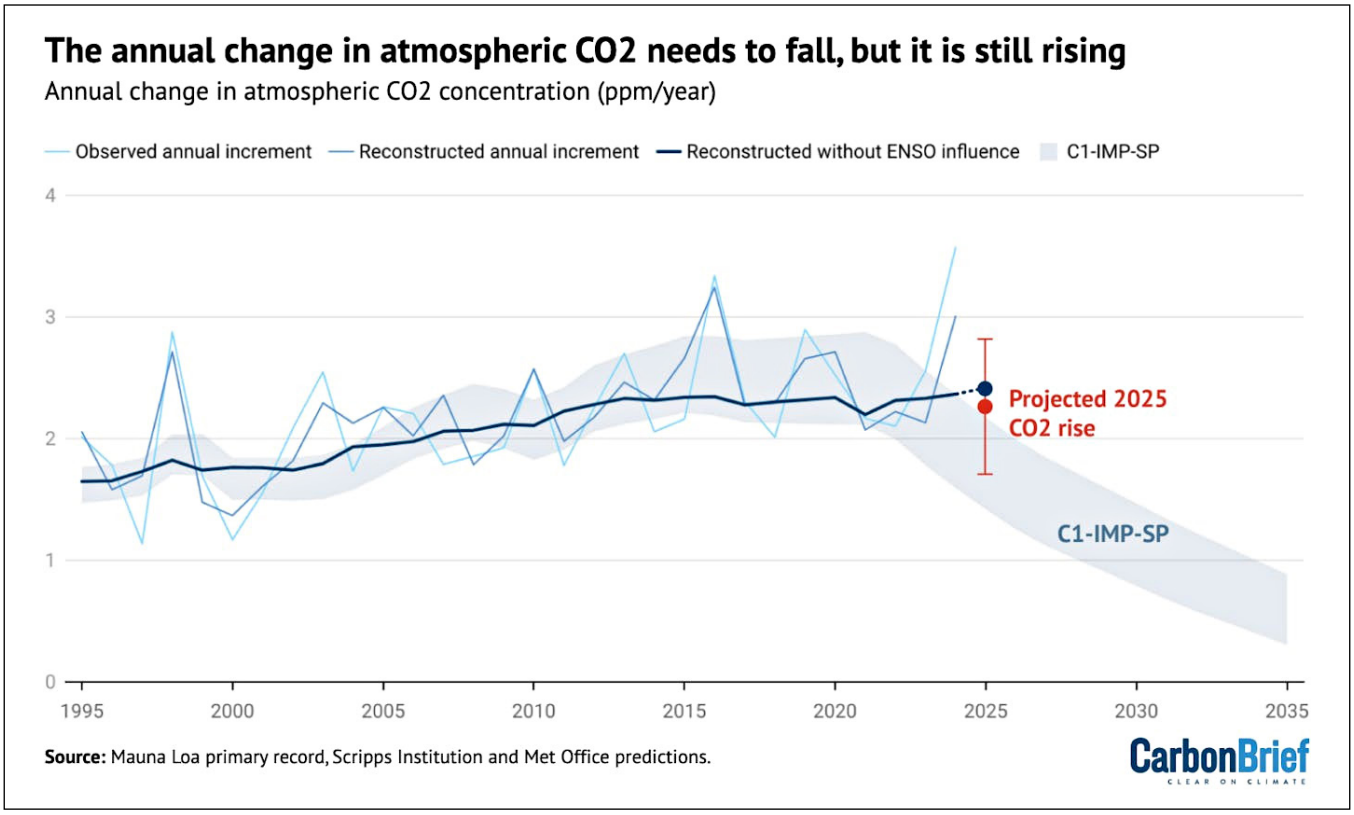
At least some of this weakening of land carbon sinks was associated with the El Niño conditions in the first part of the year. El Niño events shift weather patterns around the globe, leading to hotter, drier conditions in many parts of the tropics. This means that vegetation grows less well and more carbon is released from decay in soils and from wildfires, leading to land ecosystems removing less carbon from the atmosphere than usual.

With the El Niño now subsided and conditions shifting more towards the opposite pattern of La Niña, natural land carbon sinks can be expected to recover again, at least to some extent.

As a result, in our Met Office forecast of the CO2 rise at Mauna Loa, we predict a slower rate of

Decade	Observed average CO2 rise (ppm/year)
1960s	0.86
1970s	1.22
1980s	1.58
1990s	1.55
2000s	1.91
2010s	2.41
2020s (2020-2024)	2.58

Table: Carbon Brief



Comparison of recent and forecast annual change in atmospheric CO2 concentration with an illustrative scenario limiting global warming to 1.5C. Light blue thin line: Annual change in CO2 concentration at the Mauna Loa observatory from observations. Mid-blue thin line: Annual increments in CO2 concentration at the Mauna Loa observatory reconstructed using statistical relationship between concentrations, emissions and the El Niño-Southern Oscillation (ENSO). Red dot with vertical error bars: the 2025 forecast increment. Dark blue thick line and dark blue dot: estimated increments without the influence of ENSO. Grey plume: simulated CO2 concentrations in the C1-IMP-SP scenario limiting global warming to 1.5C with >50% likelihood.

rise between 2024 and 2025 than between 2023 and 2024. The projected increase is 2.26ppm (with an uncertainty range of ±0.56ppm) – slightly slower than it would have been without the effects of La Niña.

However, even this is still too fast to stay on track with the IPCC 1.5°C-compatible scenarios. This is highlighted in the chart below, which shows the annual change in CO2 levels at Mauna Loa since 1995 (blue lines) and how our forecast for 2025 (red point) exceeds a pathway consistent with 1.5°C (grey plume).

Faster rise than expected

The specific reasons for the very large increase in CO2 in 2024 are not yet completely clear, although weaker land carbon sinks appear to be implicated. We had forecast the 2023-24 CO2 rise at Mauna Loa to be 2.84ppm (±0.54) – faster than the average of the previous decade due to the El Niño. We had also highlighted the possibility that it could be the fastest annual rise on record.

However, the actual CO2 rise of 3.58ppm was even faster than expected. This was above the upper limit of our uncertainty range, which should include the forecast value 95 per cent of the time.

Although carbon emissions from fossil fuel burning and deforestation were also at a record high in 2024, this does not fully explain the shortfall in our forecast.

Our forecast method uses the global emissions from the previous year as one of the inputs. The emissions in 2024 were estimated to have been 11.3bn tonnes of carbon (GtC), slightly higher than the 2023 value of 11.1GtC used in our forecast.

This 0.2GtC difference is equivalent to about 0.09ppm of CO2 in the atmosphere. So, even if we had used the larger value in our forecast, the observed rise would still have been beyond our uncertainty range.

Therefore, the origin of the discrepancy must be related to natural carbon sinks, which must have been even weaker than the expected weakening that occurred as a result of the 2023-24 El Niño.

Weaker land carbon sinks

Scientists had already established that land carbon sinks were exceptionally weak in 2023, with very high temperatures worldwide playing a part in this.

2024 was then even hotter than 2023 – and indeed was the first calendar year where warming exceeded 1.5°C above pre-industrial

This 0.2GtC difference is equivalent to about 0.09ppm of CO2 in the atmosphere. So, even if we had used the larger value in our forecast, the observed rise would still have been beyond our uncertainty range.

levels. It can be expected that the climatic conditions this warmer year once again led to weaker global land carbon sink.

Both North and South America saw high temperatures and exceptionally severe fires in 2024, including in regions not normally affected by El Niño such as Canada, and extending beyond the season of El Niño influence.

Global fire emissions were estimated as 1.6-2.2GtC over January-September 2024, 11-32 per cent above the 2014-23 average for the same months.

Moreover, fire emissions in the northern hemisphere were 0.5-0.6 GtC per year, which was 26-44 per cent above the average of 2014-23. Since Mauno Loa is in the northern hemisphere, this may explain why the local rise there was even larger than the global average.

A portion of these fire emissions may already be accounted for in the above estimate of land-use emissions, but it is not possible to quantify this. Nevertheless, widespread fire activity likely contributed to the large rise in atmospheric CO2 concentrations in 2024. Further analysis is needed to quantify the size of this contribution.

Climate change itself may have played a role in enhancing fire emissions. For example, human-caused warming made the "unprecedented" wildfires that spread across Brazil's Pantanal wetlands in June 2024 between four and five times more likely.

Although land carbon sinks are generally increasing as a result of rising CO2, Earth system model projections have long indicated that ongoing global warming would reduce this effect, leading to a greater proportion of human-caused emissions remaining in the atmosphere.

Calculations suggest that this has already been occurring in recent years, so a key question is whether the last two years have seen an acceleration. If natural carbon sinks weaken more than already expected, this would further increase the difficulty of slowing the rise in atmospheric CO2 concentrations.

With global warming ongoing, extremely high temperatures will continue to occur more frequently and severely, so events such as those seen in 2023 and 2024 could play an ever more important role in the global carbon cycle.

Alternatively, there are a number of historical years for which our CO2 forecast procedure gives almost as large departures between predictions and outcomes as for 2024. For example, 2003 saw a large rise at Mauna Loa despite not being an El Niño year, due to large fires in Siberia. It will therefore be important to see whether there is a higher-than-expected rise in CO2 in 2025, or whether the large exceedance in 2024 is a temporary phenomenon.

With global warming ongoing, extremely high temperatures will continue to occur more frequently and severely, so events such as those seen in 2023 and 2024 could play an ever more important role in the global carbon cycle.

The contribution of fires attributed to climate change is consistent with model simulations which suggest that global fire activity will already be weakening land carbon sinks. Further monitoring of the global carbon cycle will help to reveal whether this is indeed the case.

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(Source: https://www.eco-business.com/news/met-office-atmospheric-co2-rise-now-exceeding-ipcc-15c-pathways/)

Data suggests women do at least two and a half times more unpaid household and care work than men. Time use surveys help quantify that labour for making better policy decisions.
Image: Amit Ranjan Unsplash

MAKING WOMEN'S WORK COUNT, IN REAL TIME

Quantitative summaries of how women spend their time are helping make gendered, unpaid labour and care work visible, writes **Manjula M** and **Sangita Dutta Gupta**

Claudia Goldin, Nobel laureate and American labour economist, calls it "greedy" work. This is work that requires long, inflexible working hours and pays disproportionately more on a per-hour basis. It includes the work of professionals such as doctors, lawyers and those in the finance industry. According to Goldin, since the early 1980s, jobs with the greatest demands for long hours and the least flexibility have paid disproportionately more, while earnings in other occupations have stagnated.

For instance, positions that women find hard to enter, such as those in finance, are precisely those that have seen the greatest increases in income in the last several decades. The reason women are losing out is because they are spending a disproportionate amount of time on domestic and caregiving responsibilities such as childcare.

Their ability to perform in jobs that demand "greedy work" are constrained by their caregiving responsibilities. For instance, 53 per cent of women in India cite care responsibilities as reason for not participating in the labour force, while the corresponding figure for men stands at 1.1 per cent.

This link between greedy work, economic opportunities for women and the gendered pay gaps has brought to the fore discussions around "women's time" and what they do, or rather, can do with it.

Working from, and for, home

Women contribute a major chunk of household labour in the form of unpaid labour — they carry out at least two and a half times more unpaid household and care work than men. But conventional national statistics of work and production ignore this, excluding two-thirds of work and economic production by women.

In 1993, in response to criticism by feminist economists, the United Nations' statistical commission revised the system of national accounts and broadened its scope by redefining the boundaries of production. The system of national accounts is an internationally agreed standard set of recommendations on how to compile measures of economic activity.

The revision was made to expand the definition of work to include non-economic activities, thereby capturing unpaid work too.

To account for household production, the commission suggested creating satellite accounts that are separate from — but consistent with — the main accounts of the market economy.

Satellite accounts help measure the size of economic sectors such as unpaid domestic and care work that are not classified as industries in national accounts.

The Platform for Action adopted by the Fourth World Conference on Women in Beijing, 1995 — considered the most progressive blueprint ever for advancing women's rights — also demanded the full recognition of women's economic production.

It called for several measures including improving data collection on unpaid labour in non-market production, and measuring and quantifying care work.

It is in this context — push for better statistics to understand the gendered nature of household labour — that Time Use Surveys gained prominence.

Time-use surveys are designed to collect quantitative summaries of how individuals spend or allocate their time over a specified period, typically over a day or a week.

They describe the daily life of a population in terms of what people do, how much time they spend on each activity, and the context of those activities.

These surveys have helped make gendered labour visible by quantifying it, and thus contributing to valuable inputs for policy and business decisions.

The surveys are not new, though. They have been used by developed countries to measure informal and subsistence work since the 20th century. These surveys help classify activities into different production categories.

First, those that fall within the system of national accounts' production boundaries such as production for markets and household consumption.

Second, activities that fall outside the conventional production boundary such as unpaid household services, care work and voluntary activities.

Besides, time-use surveys also capture personal activities such as socialising and self-care.

Data generated by these surveys has been used in the system of national accounts and labour statistics in some countries such as Ecuador, Japan, Mexico, Vietnam and Ghana.

Quality, not just quantity

Despite their utility, these surveys have their own challenges, especially in the context of developing countries.

First, they are costly – equally, if not more, compared to other household surveys — and require skilled staff such as interviewers and supervisors.

The training and skills of the enumerator are critical when people engaged in multiple activities are asked to recall them in the past 24 hours. A well-trained interviewer would be able to put these activities into relevant categories.

Both the quantity and quality of time are important, but these surveys do not adequately capture the qualitative aspects.

For instance, time spent on work that people enjoy differs from time spent on work they dislike — an hour of work doing a task you dread is not the same as an hour doing a task you love.

The survey may then miss the distinction between slow and fast workers and does not capture information on the quality and efficiency of work.

Social and cultural norms can also influence responses. For instance, men may answer questions on behalf of women, leading to an underreporting of their actual contributions when it comes to unpaid work.

Illiteracy and language barriers also impact both the quality of the data and the respondents' ability to participate. Some respondents may struggle to understand the questions or may be unable to articulate their answers clearly.

Efforts are being made to design time-use surveys so that they are easier to conduct and analyse.

Women face persistent pay gaps and economic inequalities due to the disproportionate share of unpaid work they do. Quantifying it through time-use surveys and using the data generated to inform policy decisions is one way to address this issue.

Time-use surveys are designed to collect quantitative summaries of how individuals spend or allocate their time over a specified period, typically over a day or a week.

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(Source:https://www.eco-business.com/opinion/making-womens-work-count-in-real-time/)

Dhobi ghats release over 3,200 microfibres per litre of wastewater, while commercial laundries discharge almost 37,000 microfibres per litre. Most of these particles come from synthetic fabrics such as polyester and nylon, which are non-biodegradable. *Image: Ninara, CC BY-SA 3.0, via Flickr.*

MICROFIBRES IN INDIA'S DHOBI GHATS A 'SILENT DISASTER'

Open-air laundries, a cultural hallmark in India, face scrutiny for microfibre pollution, with filters and biodegradable detergents offering potential solutions.

India's traditional open-air laundries, known as dhobi ghats, hold cultural significance and have provided livelihoods to thousands of washers for generations. But these communal washing facilities now face a modern environmental challenge, in the form of microfibre – putting aquatic and human health at risk.

Tiny synthetic particles, released from clothes during washing, are polluting rivers, lakes and other water bodies in India, according to researchers. They say major rivers such as the Jhelum in Kashmir and the Ganges in the north, as well as lakes across the country, are under threat. Rouf Rafiq, assistant professor at the University of Kashmir, told SciDev.Net: "Microfibre pollution is a silent yet growing issue.

"Millions of synthetic fibres are shed from clothes during washing,

especially in dhobi ghats and commercial laundries, where filtration systems are often absent.

"These fibres enter water bodies, accumulate over time, and disrupt aquatic ecosystems."

A study by researchers at the National Institute of Technology (NIT) Srinagar, published earlier this year, was the first to measure the levels of microfibres in wastewater from dhobi ghats and similar commercial laundries.

In Hindi, dhobi means washerman, and ghats are landing or steps leading to the river for bathing or washing. They are part of India's huge informal economy. But according to the study dhobi ghats release over 3,200 microfibres per litre of wastewater, while commercial laundries discharge almost 37,000 microfibres per litre.

Most of these particles come from synthetic fabrics such as polyester and nylon, which are non-biodegradable. Once in the water, these microfibres harm aquatic life and eventually make their way into the human food chain.

In Kashmir, the Jhelum River and Dal Lake are crucial for the region's ecosystem. They support tourism and provide livelihoods for thousands of people, including fishermen. However, microfibre pollution poses serious risks, affecting both wildlife and humans.

'A silent disaster'

Many dhobi ghats in Srinagar operate along the banks of the Jhelum River, with the wastewater from these ghats flowing untreated into the river.

"Dal Lake and the Jhelum River are lifelines for thousands of families in Srinagar," said Irfan Khan, a local environmentalist.

"The rising microfibre pollution is a silent disaster we must address immediately." However, for washermen like Bashir Ahmad, a third-generation worker at a dhobi, the river is central to their work and life. "This is our only source of income," he said. "If we are forced to stop or change how we work, what will happen to our families?"

> **"This problem starts at home because we all use synthetic clothes. People need to be aware of how their laundry choices impact the environment.**
>
> **–SUHAIB RAFIQ**
> Campaigner, Shahr-e-Khaas Literary and Cultural Welfare Society

Ahmad and others like him feel helpless as they lack resources and knowledge about alternatives. "No one has guided us or given us affordable solutions. We need help from the government and experts," Ahmad added.

Nazir Ahmed, another washerman, stressed that the ghats are a part of their heritage. "We've inherited this work from our fathers and grandfathers. It's not just a job; it's our identity," he said.

Ghulam Hassan Mir, an elder from the dhobi ghat community, shared a similar sentiment. "This work has been passed down to us for centuries.

"Washing clothes in the river is not just a livelihood; it's an art and a responsibility we've carried with pride." But, he added: "Times are changing and we need guidance to protect both our heritage and the water that sustains us."

Pollution solutions

As well as microfibres, chemical detergents pose a huge risk to aquatic life and human health, while untreated sewage ends up in many rivers. Rafiq believes there are ways to balance tradition with sustainability. He suggests installing low-cost microfibre filters at dhobi ghats. These filters can trap synthetic fibres before the wastewater enters water bodies.

"Centralised laundry facilities with proper wastewater treatment systems could also help. These would reduce pollution and improve working conditions for washermen," Rafiq said.

Other solutions include using biodegradable detergents and raising awareness about eco-friendly practices among washermen.

Local residents and organisations are also calling for government action. Mohammad Yaseen, a Srinagar resident, stressed the need for financial aid and education programs for washermen. "They are willing to adapt, but they need resources and support. This is a shared responsibility," he said.

Environmental groups are also emphasising the role of households in minimising microfibre pollution.

"This problem starts at home because we all use synthetic clothes," said Suhaib Rafiq, a member of a Srinagar-based NGO Shahr-e-Khaas Literary & Cultural Welfare Society, adding: "People need to be aware of how their laundry choices impact the environment."

This article was originally published on SciDev.Net. Read the original article.

(Source: https://www.eco-business.com/news/microfibres-in-indias-dhobi-ghats-a-silent-disaster/)

A universal declaration on nature is urgently needed to shift the global political will from business-as-usual toward prioritising environmental preservation over profit. *Image: Raj, CC BY-SA 3.0, via Flickr.*

IT'S TIME FOR A UN 'UNIVERSAL DECLARATION ON NATURE'

The 'rights of nature' is an allied approach, but nature needs something with more and broader teeth, that can elicit a moral and political consensus on the need for nature conservation, writes **Katherine Snow**

Attending the UN climate (COP28) and biodiversity (COP16) conferences during the past two years, it strikes this observer that the UN specialist environmental agreements on climate, biodiversity, pollution, hazardous waste, desertification, and so forth, all tacitly assume a global political context other than the one we are in.

This political context is something we as a human community urgently need to build, not only for the sake of seeing such agreements succeed, but even more, for moving toward a day when they are no longer necessary.

The currently missing political context goes well beyond the euphemistic "lack of political will" sometimes fleetingly referenced – as if with sufficient will, these specialist agreements alone would suffice to preserve the planet, without requiring any further political or economic change.

In fact, it is not a lack of political will that is the problem, but rather an inordinate amount of very real political and cultural will operating against these agreements' success, against making the environmental expert's view of the world successful in overtaking the power broker's view.

On the power-broker's side, these agreements seem irrational; they buck the dominant trends afoot, not only in material terms, but in terms of ideas and zeitgeist.

It is rational by major companies' standards to do away with even their fleeting lip service to ESG, as many now are, because the entire notion of ESG is at odds with the mainstream, oil-based economy, which operates in a frame entirely devoid of any goals or values except providing goods and services that people buy and use (and buy and use them we do, at scale), and making a profit while doing so.

The environmental experts and the major companies of the world (and national governments to a great extent) are still operating within entirely different conceptual schemes, as the philosophers might say. What makes sense to one, literally does not compute for the other.

Seen against this backdrop, the long and painstaking delegate discussions on the various texts and motions of the UN-convened multilateral environmental agreements evoke the cart being put before the proverbial horse – the horse here being the power-brokers who can really enforce national-level implementation.

Again, the horse is right now not even present on the same road, much less even close to being hooked to the cart of eco-agreements. The horse is fully occupied pulling the overloaded wagon of business-as-usual (BAU) up a completely different hill, and it is not rational to expect the horse to cut itself in half and pull two carts in two different directions.

Though this is not a popular sentiment in the 'expert-o-sphere,' it seems that the only way forward is to persuade the horse to slow down (and eventually unhook itself from the BAU wagon altogether) using values-based, political arguments, not scientific facts or eco-expert opinions.

The BAU wagon is not stopped by facts, not even facts which suggest that eventually, the road it is on leads to a cliff. The BAU wagon figures that if and when the cliff actually does loom very blatantly and force the stop, then this is when it will stop. And not a moment before.

While many rail against BAU about this, it may be partly due to our evolutionary tendency: pushing right up against limits before being forced to adapt, like many other species. We don't, in the modern West at least, have a good track record of scaling back on resource use before we are forced to, and merely due to facts-based foresight.

The only things that can sway leaders and nations to undertake rapid systems change of any kind are ideas, values shifts and political movements – not facts. Values, beliefs, and politics do have a long historical record of moving whole groups, tribes, societies and nations to change their behaviours and their perspectives relatively quickly, whether for good or for ill (including from the perspective of harms to nature).

New ideas and new values are how and why we change. They seem like the only things that can slow the wagon of BAU down now, short of flat-out environmental catastrophe.

The UN has an important role to play in accomplishing environmental preservation, but it needs to fire up its old political core spirit. Some member country needs to put forward an unflinchingly political and ethical new universal declaration on nature.

Some bloc of countries needs to make the General Assembly take up such a declaration and make every leader vote up or down on it, on behalf of their people, and then the UN's formidably large workforce with its global presence needs to carry the message (and the list of the up and down votes) to the public so that the political and ethical debate can continue.

BAU in the end cannot exist without serving a need for people. If the people develop a political will to change what they will accept, things can change, and rapidly. The BAU inertia does not favour true political discussion for this very reason.

BAU actors want to continue to stovepipe and export to experts, or minimise environmental issues as though they were marginalise-able. The global community can begin to refuse at least this laziness through forcing a debate on the ethical merits of preserving nature, and the political values associated with it as a potential course of action.

In 1948, the UN General Assembly passed the Universal Declaration of Human Rights. It was at its heart a moral position paper. Whether countries passed or rejected it constituted a political statement, a statement about who they were as nations.

It was not even binding. But it was an example of what can happen in a global forum – and it both embodied and further catalyzed an important shift in global culture, one which truly meant something to the public then, and still does to this day, over 75 years later.

Nature needs its equivalent – and not exactly a "rights of nature" approach, per se – but a declaration in the same spirit of eliciting a moral and political consensus, or at the very least defining the opposing sides on a moral and political question. The Rio Conference in 1992, the Paris Agreement of 2015, the pablum restatements of the 'vital importance of nature' which pepper all specifically environmental documents and agreements and research papers – these are all different because they occur under the heading of environmental issues and not mainstream ones.

The mainstream public in most countries does not follow environmental research or specialist conferences, and thus most political mainstreams do not even seriously discuss it, and certainly not the nature question for its own sake, as a values issue – though it is difficult for the environmental expert community to remember this, since they remain always immersed and encased in their own [worthy but, relatively speaking, minuscule] tribe.

The vast majority of the mainstream public in the West does not question BAU, seeing it as just the way things are, with the (perhaps increasingly dizzying and daunting) array of hoops they must jump through on any given day to survive and find food and shelter for themselves and their families.

But this does not mean the mainstream does not care about or value nature for its own sake. The UN needs a 21st century resolution in the General Assembly that gives an unflinching statement of both the contemporary plight of the natural world due to human impacts, and our moral stance in favour of ameliorating this plight and having nature thrive again.

The moral stance can then become political intention. A universal declaration on nature must state that nature is of more inherent value to us than BAU, and that politically we want to unwind BAU so that where we must choose between the two, we can, as we must, choose nature. It needs to be a declaration which holds up the ethical core of the issue, and asks the question of do we, in fact, care about preserving the environment, will we make it a political priority, and do we acknowledge that this entails limits on our enterprise as a species? These are the types of general, universal questions which the public can follow and engage with, and which might excite them politically. With a good messaging and publicity campaign, the UN could help motivate a great deal of interest in such a declaration.

The question of 'Do we care?' can no longer be avoided. If a universal declaration can force each government to answer at the central, chief executive level, yes or no, this will do more to either move environmental preservation forward, or else at the very least reveal in full detail the true dimensions of the ruts keeping us all on the wagon of BAU moving together toward the cliff, than all the specialist eco-agreements under the sun can.

The question of 'Do we care?' can no longer be avoided. If a universal declaration can force each government to answer at the central, chief executive level, yes or no, this will do more to either move environmental preservation forward.

Katherine Snow is a former US national security professional, a current research associate at High Meadows Environmental Institute/Princeton University, in the fields of environment and security and philosophy of nature, and the founder of Gaia Morgan Group (GMG), a nonprofit environmental consultancy.

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(Source: https://www.eco-business.com/opinion/its-time-for-a-un-universal-declaration-on-nature/)

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Assotech Business Cresterra

Sector - 135, Expressway, Noida

1. Integrated Intelligent IT Park Complex
2. 1.8 Million SQFT Mixed Use Development
3. LEED Gold Certified Green Building Complex
4. Market Leading Floor Efficiency of 83% [+-2%]
5. 70% leased out of Phase - I

OFFICE SPACES

SERVICED APPARTMENTS
Phase - I

RETAIL
Phase - I

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info@assotech.in

Our Leasing Partners
CBRE

SAVE LIVES GIVE SMILES

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

Cleft treatment can change this. Forever.

OUR LEGACY & REACH:

640,000+ cleft surgeries since 2000

150+ partner hospitals

30+ states and UTs

300+ cleft medical professionals

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

Let your CSR Program transform lives and create lasting impact.

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

Contact us:

Email ID: csrindia@smiletrain.org

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

www.smiletrainindia.org

SmileTrain
Changing India One Smile At A Time

National Cleft Helpline – 1800 103 8301