

CSR TODAY

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CLIMATE CHANGE COMPOUNDING INEQUALITIES FACED BY WOMEN IN AGRICULTURE, FAO SAYS

Women working in agriculture 'tend to do so under highly unfavourable conditions' – often in the face of 'climate-induced weather shocks and in situations of conflict,' a new report from the UN Food and Agriculture Organization (FAO) concludes.

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Role and Relevance of the Youth in Policy-making and Governance: India, G-20 and Beyond

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India's lithium discovery comes with environmental costs

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Indigenous, conservation groups pen guide on tropical forest carbon credits



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Climate change continue to advance



Rajesh Tiwari
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Droughts, floods and heat waves affected communities on every continent and cost many billions of dollars. Antarctic sea ice fell to its lowest extent on record and the melting of some European glaciers was, literally, off the charts.

From mountain peaks to ocean depths, climate change continued its advance in 2022, according to the annual report from the Geneva-based World Meteorological Organization (WMO).

The report speaks about the heatwaves in India and its impact on food security.

Droughts, floods and heat waves affected communities on every continent and cost many billions of dollars. Antarctic sea ice fell to its lowest extent on record and the melting of some European glaciers was, literally, off the charts.

The State of the Global Climate 2022 shows the planetary scale changes on land, in the ocean and in the atmosphere caused by record levels of heat-trapping greenhouse gases.

For global temperature, the years 2015-2022 were the eight warmest on record despite the cooling impact of a La Niña event for the past three years. Melting of glaciers and sea level rise - which again reached record levels in 2022 - will continue for thousands of years.

"While greenhouse gas emissions continue to rise and the climate continues to change, populations worldwide continue to be gravely impacted by extreme weather and climate events. For example, in 2022, continuous drought in East Africa, record breaking rainfall in Pakistan and record-breaking heatwaves in China and Europe affected tens of millions, drove food insecurity, boosted mass migration, and cost billions of dollars in loss and damage," said WMO Secretary-General Prof. Petteri Taalas.

On food security, the report states that as of 2021, 2.3 billion people faced food insecurity, of which 924 million people faced severe food insecurity. Projections estimated 767.9 million people facing undernourishment in 2021, 9.8% of the global population. Half of these are in Asia and one third in Africa. Heatwaves in the 2022 pre-monsoon season


in India and Pakistan caused a decline in crop yields. This, combined with the banning of wheat exports and restrictions on rice exports in India after the start of the conflict in Ukraine, threatened the availability, access, and stability of staple foods within international food markets and posed high risks to countries already affected by shortages of staple foods.

"The pre-monsoon period was exceptionally hot in India and Pakistan. Pakistan had its hottest March and hottest April on record, with both months having national mean temperatures more than 4 °C above the long-term average. In India, grain yields were reduced by the extreme heat and there were a number of forest fires, particularly in Uttarakhand," the report states.

Climate change has important consequences for ecosystems and the environment. For example, a recent assessment focusing on the unique high-elevation area around the Tibetan Plateau, the largest storehouse of snow and ice outside the Arctic and Antarctic, found that global warming is causing the temperate zone to expand.

The new WMO report is accompanied by a story map, which provides information for policy makers on how the climate change indicators are playing out, and which also shows how improved technology makes the transition to renewable energy cheaper and more accessible than ever.

In addition to climate indicators, the report focuses on impacts. Rising undernourishment has been exacerbated by the compounded effects of hydrometeorological hazards and COVID-19, as well as of protracted conflicts and violence.

Throughout the year, hazardous climate and weather-related events drove new population displacement and worsened conditions for many of the 95 million people already living in displacement at the beginning of the year, according to the report. 

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Tata Motors Serves the Nation's Heroes, Ties Up with Kendriya Police Kalyan Bhandar



Tata Motors, one of India's largest automotive manufacturers, is proud to join hands with the Kendriya Police Kalyan Bhandar (KPKB), to extend its class-leading Cars and SUV offerings to police personnel and their families across the nation. The handover ceremony of the sanction letter has been carried out in New Delhi, in the presence of senior dignitaries from both Tata Motors and KPKB.

As a measure of welfare for the currently servicing and retired personnel of Railway Protection Force (RPF), The Intelligence Bureau (I.B), Special Protection Group (SPG), National Crime Records Bureau (NCRB), National Investigation Agency (NIA), Indo-Tibetan Border

Police (ITBP), Central Reserve Police Force (CRPF), Sashastra Seema Bal (SSB), Central Industrial Security Force (CISF), Border Security Force (BSF), Assam Rifles (AR) and all State Police Organizations personnel, the Ministry of Home Affairs set up the Kendriya Police Kalyan Bhandar (KPKB) on 18th Sept 2006. Currently they have 119 Master Canteens which act as distribution centres and 1778 subsidiary canteens which sell products to the troops and families, serving more than 34 lakh personnel from central and state police departments. As a part of this coveted association, Tata Motors Cars and SUVs will be available to all members of the organisation through this network at special prices.

ACF wins the Indian Chamber of Commerce Social Impact Award '23 for its projects in West Bengal and Chattisgarh

Ambuja Foundation, an independent, pan-India development organization, committed to generating prosperous rural communities has won the Indian Chamber of Commerce Social Impact Award 2023. The foundation has been awarded for its work in skills and women empowerment category in Sankrail, West Bengal and Bhatapara, Chattisgarh. The ICC Social Impact Awards is an initiative of the Indian Chamber of Commerce (ICC) in which the Chamber engages with Corporate entities, NGOs and implementing agencies to recognize them for exemplary work done in the field of social investment, CSR and sustainability on a PAN India basis.

ACF's Sankrail team won the ICC Social Impact Jury Award in the category of Employment Enhancing Vocational Skills in the large project category while its Bhatapara team won the Women Empowerment Category award. Ambuja Foundation won this prestigious award for the fifth time in a row while competing with 80 NGOs, PSUs and CSR Foundations.

National award-winning actor Shefali Shah joins the P&G Shiksha movement to shine a spotlight on the #InvisibleGap in a child's education

P&G Shiksha, the flagship CSR program of P&G India, has launched a first-of-its-kind nationwide movement to throw spotlight on a hidden issue called 'Invisible Gap', through a power packed panel deliberation in Mumbai. Studies indicate that students in schools often fall behind in keeping pace with their classes. One concept, one subject, one class, can give way to a larger issue where the child develops a gap in the fundamental conceptual understanding. When the child falls behind and the current learning level is not in line with the expected learning level as per the defined curriculum, an invisible learning gap is formed.

The discussion, centered around the theme of 'Bridging Invisible Gaps' and moderated by Priyanka Khanna, Author and Former Journalist, brought together Shefali Shah, National Award-Winning Actress, Girish Kalyanaraman, Vice President – Brand Operations, P&G India; Ritesh Agarwal, Assistant Vice President, Educational Initiatives; and Sagar Singh, Faculty Mathematics, Gov. High School Banah Ki Ser, Sirmour (HP). The panelists shared thought provoking insights to explain #invisibleGap, and how it significantly impacts children who perpetually keep trying to cope, and without the right support system drop out of school or face challenges in subsequent phases of life. They also discussed the role that key stakeholders, including teachers, corporates, and society could play in bridging these gaps and ensuring that every child in India learns with conceptual



L to R - Sagar Singh, Ritesh Agarwal, Shefali Shah, Girish Kalyanaraman, Priyanka Khanna



Panelists come together with protagonist Bindiya to make the invisible gap visible

understanding. During the discussion, P&G Shiksha unveiled its new first-of-its kind campaign film which highlights the problem of 'Invisible Gap' through the thought-provoking story of Bindiya, a young girl who

is impacted by the invisible gap and struggles to cope in the classroom.

P&G Shiksha, through the insightful discussion and the new film, aims to make this #InvisibleGap visible, by creating awareness and urging



L to R - Sagar Singh, Ritesh Agarwal, Shefali Shah, Girish Kalyanaraman, Priyanka Khanna

meaningful action to bridge the gap, which is impacting over 6* crore children in the country as indicated by the National Achievement Survey, 2021. While the program continues to drive on-ground interventions to bridge learning gaps in children, through the heart-warming story of Bindiya, it is urging the audience to take collective action and do their bit by taking the baseline test to identify learning gaps in children around them and take remedial measures to bridge it.

Speaking on the occasion, actor Shefali Shah remarked, "I believe that education is the key to unlocking a child's full potential. I knew of how challenging education can be for children, from my own personal experience and that with my kids, but this partnership with P&G Shiksha has made me cognizant of #InvisibleGaps in learning that impact a vast number of children, when they fall behind expected learning levels. It's heartening to see P&G Shiksha is working towards not

just making this invisible gap visible, but also bridging it with relevant on-ground interventions. Actions start with awareness, and I am glad that I can be a part of this journey with P&G Shiksha. When all of us play our part, we can help create an environment where every child is encouraged to achieve their full potential through holistic education."

Speaking about the new film, Girish Kalyanaraman, Vice President

P&G Shiksha launches a nationwide movement to make invisible learning gaps visible, through a power-packed panel in Mumbai

Since its launch in 2005, P&G Shiksha has continued to make holistic educational interventions, impacting over 35 lakh children across the country

– Marketing Operations, P&G India said, "P&G Shiksha has continued to work tirelessly to provide access to education to millions of underprivileged children since its inception 18 years ago. We are taking this journey forward through the first-of-its-kind campaign and story of Bindiya, with the objective of driving nationwide awareness and urging meaningful action around invisible gaps which are impacting crores of children in our country. Our aim is to highlight that what is often misunderstood as the child being naughty or disinterested in learning, may instead be a sign of the invisible gap that arises when children fall behind and their current learning level is not in line with the expected learning level.

To bridge this gap, P&G has been working with its partners through various programs – from leveraging advanced Machine-learning based tools to community-level learning camps. While we are working to tackle the issue on ground, we hope that this movement inspires everyone to identify this gap in children around them and take necessary corrective measures to bridge it."

Ritesh Agarwal, Assistant Vice President, Educational Initiatives added, "We believe that every child has the right to quality education, and through our association with P&G Shiksha we have been committed to making this aspiration a reality in communities that are strained on resources. This initiative is a powerful reminder of the impact that education can have on a child's life, and we hope that it will inspire more people to support our cause. With the Mindspark tool developed by EI, we can identify the children lagging in schools and creating a personalized learning path that enable them to learn at a pace, on topics and at times that are convenient for them. We have seen this approach to be very effective in improving the learning levels amongst children and bridging this #InvisibleGap."

Krish-e launches IoT based Smart Kit for farm equipment

With the Krish-e Smart Kit, Mahindra aims to track & digitise every acre & kilometre of rental activity carried out in the country

Krish-e Mahindra's AgTech business launched the Krish-e Smart Kit (KSK).

An after-market device, the Krish-e Smart Kit is the first-of-its-kind smart device that provides equipment owners with detailed insights of their tractors and farm equipment, through GPS enabled time tracking and remote monitoring of various parameters from the comfort of a smart phone.

A cutting-edge offering, the Krish-e Smart Kit is developed by Carnot Technologies, an Ag-Tech start-up, founded in 2015 by four alumni from IIT Bombay in their mid-20s, who as part of the IITB racing team, developed solutions to monitor the performance of race vehicles from the pit. Today Carnot Technologies is engaged in manufacturing and retailing products and services related to internet-connected devices for monitoring performance of vehicles and equipment, with M&M Ltd. having acquired a significant stake in the company.

The Krish-e Smart Kit enables equipment owners and rental entrepreneurs to sustainably improve fleet performance, improve incomes and manage maintenance costs, while reducing tractor downtime and preventing unauthorised usage of their tractors. The Smart Kit also includes an advanced trip replay feature for tracking commercial transportation and trolley activity. The kit is brand



agnostic and can be installed on any new or old brand of tractor or farm equipment, such as harvesters, rice transplanters and self-propelled sprayers. The kit is paired with an app called the Krish-e Rental Partner App and is available on the Google Play Store. In addition to tracking and monitoring, the app also offers users access to an inventory of high-end farm machinery on a pay per use basis.

Ramesh Ramachandran – Senior Vice President and Head Krish-e – Farm Equipment Sector, M&M Ltd. said, “An industry first aftermarket IoT solution, the Krish-e Smart Kit presents the smartest, most affordable and sustainable way for farmers and businesses to connect and monitor their farm equipment on the go. In its scale-up phase, with over 25,000 active users we will officially launch the Krish-e Smart Kit. Besides farmers, we invite institutions, FPO’s, government bodies and start-ups in the state to partner with us on this connected journey as we aim to digitise every acre and kilometre of rental activity. Going forward we aim to become the

leading provider of connectivity for farm equipment in India.”

Pushkar Limaye – CTO, Carnot Technologies commented, “With a vision of building world-class products out of India, we came up with a small plug-and-play device for tractors to help improve their productivity using IoT, with real-time updates on smartphones. And today we are glad to see over 25,000 kits having already helped farmers digitise their businesses and adding real value on ground. And today with the official launch of the Krish-e Smart Kit, together with Mahindra, we aim to digitise Indian farming with an India-based solution, while reaching a larger audience of tractor owners and rental business owners. So far Krish-e has over 25,000 active subscribers, 85% DAU (daily active users), spending about 55 minutes per day on the app (in season), with 70% resubscriptions post expiry of the free subscription period.

Individual farmers, institutional buyers, FPOs, and start-ups can purchase the Krish-e Smart Kit from the nearest Krish-e center, the

Krish-e Smart Kit

- Easy tracking of all brands of tractors, harvesters & rice transplanters via a smart phone or desktop
- Increases operator revenue with accurate acreage measurement
- Reduces fuel cost by monitoring fuel levels and alerting for fuel theft
- Tracks total fleet expenses and reduces fleet maintenance cost
- Increases equipment security through geofencing alerts
- Offers advanced trip replay features
- Retails at an introductory price of INR 4,995

Krish-e website, or Krish-e Sahayaks by calling 1800-266-1555 at an early bird price of INR 4,995 (including taxes and a six-month subscription package for the aforementioned services). Launched in 2020, Krish-e is a new business vertical from Mahindra. Krish-e offers technology driven services, to minimise income potential of farmers and other value

chain players sustainably. Carrying the tag line – ‘Expert Takneek. Naye Upay. Parinaam Dikhaaye’, Krish-e services currently focus on the areas of Farm Advisory, Equipment Rental & Used Equipment through an omnichannel presence which includes 150 Krish-e centers and app-based touch points. Krish-e efforts have been recognised and included

in the World Economic Forum’s (WEF’s) January 2023 White Paper on “Accelerating Business Action on Climate Change Adaptation” as an example on how businesses can collaborate with communities to ensure the sustainability of critical natural resources.

About Mahindra

Founded in 1945, the Mahindra Group is one of the largest and most admired multinational federation of companies with 260,000 employees in over 100 countries. It enjoys a leadership position in farm equipment, utility vehicles, information technology and financial services in India and is the world’s largest tractor company by volume. It has a strong presence in renewable energy, agriculture, logistics, hospitality and real estate.

Wind and solar reach a record 12% of global electricity in 2022: report

Wind and solar reached a record 12% of global electricity in 2022, up from 10% in 2021, according to a major report launched today by energy think tank Ember.

The report forecasts that from 2023 wind and solar will push the world into a new era of falling fossil generation, and therefore falling power sector emissions.

“In this decisive decade for the climate, it is the beginning of the end of the fossil age,” said the lead author, Małgorzata Wiatros-Motyka, in a press statement.

“We are entering the clean power era,” Wiatros-Motyka added.

The fourth annual Global Electricity Review from energy think tank Ember presents electricity data from 2022 across 78 countries,

representing 93% of global electricity demand. The open data and in-depth analysis provide the first accurate picture of the global electricity transition in 2022.

According to the report, solar was the fastest-growing source of electricity for the eighteenth year in a row, rising by 24% year-on-year and adding enough electricity to power all of South Africa. Wind generation increased by 17% in 2022, enough to power almost all of the UK.

“While inflation has impacted gas-based generation and resulted in its decline, it has also impacted the cost of the supply chain for solar and wind. Even then, wind and solar generation have crossed previous marks. However, newer installations in the case of wind have recently been reported to be 78 GW by the

Global Wind Energy Council (GWEC), lower than the previous year and still the third highest in history. This optimistic turnout is good, but supply chain resilience, addressing bottlenecks around permits and clearances, and adding more grid capacity to absorb clean power as and when new electrons are ready to flow from new plants are some of the pivotal interventions needed to witness even higher annual installations, faster commissioning, and attractive supply chain pricing,” said Martand Shardul, Policy Director at GWEC-India.

The data reveals that over sixty countries now generate more than 10% of their electricity from wind and solar. Together all clean electricity sources (renewables and nuclear) reached 39% of global electricity, a new record high. Despite this progress, coal power remained the single largest source of electricity worldwide, producing 36% of global electricity in 2022.

Mobility for All: Continental with IIT Delhi Develop A Solution for Visually Impaired To Access Public Buses

Technology company Continental, Indian Institute of Technology (IIT) Delhi, and non-profit technology start-up Raised Lines Foundation (RLF) have come together for the deployment of “OnBoard”, a technology solution for assisting visually impaired people to board public transport buses. RLF was incubated at IIT Delhi, supported by the Ministry of Electronics and Information Technology (MeitY), and OnBoard development was sponsored by the Department of Science & Technology (DST), Govt of India.

Societies around the world recognize the link between the movement of people and goods with economic growth, although traveling for the disabled is still difficult, reducing their life opportunities. With the introduction of OnBoard, visually impaired individuals will have the advantage of easy access to public buses, making their mobility to a larger geographical area a possibility. OnBoard is a technology that is symbolic of inclusivity and freedom of movement.

“Mobility has to be accessible for all, and technology is the key. Even as we discuss the future of mobility as being connected, autonomous, shared, and electric, often inclusivity is overlooked. Modern technology has created a range of possibilities, but there is room for more. As part of our social responsibility, Continental is glad to partner with IIT Delhi and Raised Lines Foundation to support further development and trials of the OnBoard solution”, says Prashanth Doreswamy, President & CEO of Continental India.

“IIT Delhi has been a hotbed of innovation, and we believe in the



power of technology to make a difference in the lives of people. Industry academia partnership can further strengthen such R&D initiatives.” according to Prof. P.V. Madhusudhan Rao, Mechanical Engineering Department, IIT Delhi. “OnBoard helps take one step forward towards making public transport in India more inclusive,” he added.

Public Transport becomes more user-friendly through OnBoard

OnBoard addresses specific challenges associated with access to public buses by the visually impaired in

India. The OnBoard solution helps a visually impaired person independently board a public bus by solving two challenges they face, viz. identifying the route number of the bus, and identifying the location of the door of the bus using an audio cue generated by a speaker on the bus.

The device consists of three separate units - A bus unit that contains a controller and speaker and is connected to the electrical system in the bus; a user device that allows users to query all bus numbers in the vicinity and select the desired bus for audio response; a programming and diagnostic unit at the bus depot that

helps program a set of numbers in a bus device from which the driver can select the specific route number the bus is operating on. This device also helps in diagnostics.

Incubated at IIT Delhi, the solution also has completed preliminary testing. The first set of testing was successfully done first in Delhi (5 DIMTS coordinated cluster buses) and in Mumbai (25 BEST buses) and again in Delhi (23 DIMTS coordinated cluster buses). Though these pilot trials have established the effectiveness of the device, a larger-scale deployment is necessary for the launch of this solution, which



will benefit thousands of people. The next phase of the project will focus on wider-level testing.

According to Prof. M. Balakrishnan, Honorary Professor, CSE Department, IIT Delhi, and the primary force behind the project, "Mobility is a human right. Society

has the responsibility to enable people with disabilities to live independently and participate in all aspects of life. Public-private partnerships can solve several of their existing challenges of sustainable and inclusive mobility, and we are excited to partner with Continental."

Prof. M. Balakrishnan and Prof. P.V. Madhusudhan Rao were awarded the National Award by Dept of Science & Technology, under the category "scientists/technologists who have developed technologies/ assisted devices/tools for the disabled for improving accessibility for the disabled".

Biocon Academy Conducted Graduation Ceremony for 185 Students across Four Programs

Biocon Academy, a Centre of Excellence for Advanced Learning in Applied Biosciences and a CSR initiative of Biocon, a leading global biopharmaceutical company, held its seventh Graduation Day at its Bengaluru Campus, with 185 students graduating this year.

Eight batches across four programs of Biocon Academy namely Biocon KGI Certificate Program in Biosciences, Biocon JSS AHER Certificate Program in Global Regulatory Affairs, Biocon Ramaiah Certificate Program in Quality Control Analytical, and BITS Biocon Certificate Program in Applied Industrial Microbiology, participated in the graduation ceremony.

The students were felicitated by Dr Kiran Mazumdar-Shaw, Chief Mentor, Biocon Academy & Executive Chairperson, Biocon and Biocon Biologics. The ceremony was attended by faculty members, industry experts, and mentors. Eight outstanding students who topped their respective batches were awarded 'Gold Medals for Academic Excellence'.

Biocon Academy has been developing high-quality talent to bridge the gap between academia and industry requirements since 2013. Over 900 students have received rigorous academic learning and world-class industrial training on



applied aspects of various biotech-related disciplines at the Biocon Academy. Through the diverse programs, students not only gain theoretical knowledge and technical skills, but also develop a broad understanding of the industry, which help them earn placements in top biotech companies in India.

Addressing the graduates, Dr Kiran Mazumdar-Shaw, said "It gives us a sense of immense achievement to look back at how the Biocon Academy has contributed to building an ecosystem for biotech-related skills in India over the past decade. The Academy is proud of its work in creating an enabling environment that shapes biotech graduates into highly capable, forward-looking self-starters, equipped with the skills, experience and knowledge to put India ahead in the field of life sciences. I would like to congratulate all the graduating students on a job well done and wish them all success in the future."

Congratulating the students, Bindu Ajit, Program Dean, Biocon Academy, said

"The well-planned programs at Biocon Academy have equipped the students to acquire advanced knowledge and skills in their respective fields making them industry ready. I wish them all the best and am certain that they will make strides in the field of Biotechnology, making the academy and country proud."

APM Terminals Pipavav builds two check dams in Kumbhariya to assist the local community

The port has built 10 check dams so far across 7 villages that benefits close to 20,000 people

APM Terminals Pipavav has developed two new check dams for the locals of Kumbhariya village as a part of its ongoing Water Resource Management (WRM) initiative. The new check dams with storage capacity of 0.08 Million Cubic Feet (MCFT) will support local households in accessing drinking water & water for irrigation to a population of around 1,200.

This is the third check dam built by APM Terminals Pipavav in the village, and the 12th overall as part of the port's commitment to the community. In addition to check dams, APM Terminals Pipavav has also built lift irrigation system, protection walls, protection bunds, roof rainwater



harvesting structures, farm ponds, well recharging systems, sanitation units and bathrooms for the community under WRM initiative. APM Terminals Pipavav has been contributing to the community development for over a decade with multiple initiatives, and these latest check dams will help to improve water availability and support sustainable agriculture in the area. The port is supporting over thousands of households with these initiatives and has created livelihood opportunities for the villagers.

APM Terminals Pipavav is dedicated to promoting sustainable development and social responsibility in the communities where it operates, and these latest WRM initiatives are a testament to the company's commitment to creating a better future for all.

Baazi Sports Foundation continues to promote sports development among children as its core CSR vision

Baazi Sports Foundation in association with PokerBaazi, joined hands with Edspectrum Foundation to provide a level playing field to children from weaker sections of society as they explore, experience, and gain exposure to multifarious sports. In line with the government's vision of 'Khelo India' for the youth, Baazi Sports Foundation intends to support 20 children through a fellowship program that entails bearing any monetary support for their journey of sports training.

As per the data available, research depicts that sports training from an early age can result in higher cognitive functioning, thereby improving the academic performance of students. On the other hand, sports engagement fosters leadership, teamwork, and sportsmanship and provides opportunities for personal growth and development.

Sharing his views on the initiative to foster better health amongst young children, Navkiran Singh, Founder, and CEO at Baazi Games, said, "Sports act as a powerful tool to provide lifelong learning amongst children making them realize the importance of leadership, teamwork, and competitive spirit. Sports continues to be the language children connect with the most thereby positively influencing their thinking and outlook toward various hurdles in their lives. Baazi Games is proud to provide these children with an equal opportunity to enhance their passion towards a sport of their choice and aspire for glory in life."

Understanding the need for the current generation's needs, he added, "While social media continues to influence the building blocks of growth for children, it is important to guide, educate and share the positives of sport to ensure a holistic development."

Baazi Sports Foundation has pledged to support more than 300 children from the age group of 8-15 years to help children pursue different sports and realize the importance of engaging in sports in their learning and developmental journey.

FedEx Express empowers women entrepreneurs to grow their business



FedEx strengthens gender diversity commitment by supporting more than 290 women-owned small businesses from lower income groups

FedEx Express (FedEx), a subsidiary of FedEx Corp and the world's largest express transportation company, along with United Way Mumbai (UWM) is helping more than 290 women small business owners in Mumbai expand their enterprises through the Saksham initiative.

Through this initiative, women from lower-income groups who have the skills, but are unable to grow their small businesses due to lack of funding opportunities, receive the 'Saksham Kit'. These women represent a wide range of businesses across sectors including home beauty services, tailoring, and a variety of homemade products. These supplies are customized according to the need of each beneficiary, and includes the latest technology tools to improve their product quality,

reduce their production time, and help them cater to more customers.

According to a McKinsey Global Institute analysis, increasing female workforce participation in India might add USD 700 billion to global GDP. These start-ups have a more inclusive work culture and employ three times as many women as men. Furthermore, women-led firms are expected to grow by 90% over the next five years.

"Advancing gender equality is part of our commitment to diversity, equity and inclusion, not only at our workplace, but also in the communities we serve. It is an integral part of our culture and a vital business consideration to create a better future for all team members, customers, and communities", said Suwendu Choudhury, Vice President, Operations-India, FedEx Express.

"This program is part of our continuous efforts to equip women entrepreneurs and small businesses with the necessary tools to explore new possibilities and contribute to the advancement of the local economy."

George Aikara, Chief Operating Officer, UWM said, "Project Saksham recognizes that empowering women entrepreneurs not only transforms families but also contributes deeply to equitable societal development. By running their own businesses, women can expand their horizons, interact with customers and suppliers, and take on leadership roles in their families and communities. We are proud that many of our women entrepreneurs have become advocates for improving education and nutrition opportunities for girls both at home and in their communities. We are grateful for the continued support of FedEx over the years in helping us to achieve our mission."

FedEx started with supporting 400 women in 2021, and this number has since increased to over 950 women in 2023.

'Cummins Powers Women' Supports Global Non-profit Rise Up's Program to Strengthen Gender Equity in India

Cummins Powers Women, a landmark community initiative to advance Cummins Inc.'s long-term commitment to the empowerment of women and girls around the world, partnered with global non-profit Rise Up as it launched its third Leadership Accelerator Program to improve the lives of women, girls, and gender-nonconforming people in India. Rise Up works to advance gender equity and justice in education, health, and economic opportunity.

The program was supported by Ashwath Ram, Managing Director, Cummins Group in India; Shveta Arya, Executive Director – Power Systems Business, Cummins India, and Sponsor Cummins Powers Women; Ashish Aggarwal, Chief Administrative Officer, Cummins India, and Catherine Van Way, Head – Government Relations, Cummins Inc.

Hosted in Delhi, the week-long Leadership Accelerator Program was attended by 22 gender equity leaders from non-profit organizations across NCR, selected through a rigorous and competitive application process. The program helped them strengthen their leadership skills, share their diverse expertise, develop their advocacy strategies, and collaborate in their ongoing efforts to help women and girls become agents of social change. As the program graduates move forward with their projects to bolster gender equity in the areas of health, education, and economic opportunity, Rise Up will continue to provide support. Cummins and Rise Up aim to expand the program



'Cummins Powers Women' and Rise Up launch third Leadership Accelerator Program in Delhi



Shveta Arya, Executive Director – Power Systems Business, Cummins India and Sponsor, Cummins Powers Women at the CPW Rise Up third Leadership Accelerator Program

to other cities throughout India to maximize its impact.

Underlining the need for swift actions to promote gender equity, Shveta Arya, Executive Director – Power Systems Business, Cummins India and Sponsor, Cummins Powers Women said, “Empowering women is key to unlocking India’s progress and prosperity. Yet, we

are decades away from achieving gender equity. At Cummins Powers Women (CPW), we are focused on supporting initiatives that tackle gender disparities head-on to transform the lives of women and girls. We congratulate the new graduates of Rise Up Leadership Accelerator Program and look forward to working with Rise Up and Rise Up

Leaders as they create equal opportunities for women and accelerate progress toward gender equity. At Cummins, we recognize that a more inclusive and diverse world is a better world for everyone.”

Vidhu Prabha, Rise Up Country Lead for India said, “Given the social, cultural, religious, and geographic diversity in India, there is tremendous value in Rise Up’s commitment to support local non-profit leaders who are best suited to identify the most urgent issues and solutions to achieve systemic change. Our multi-year



Cummins and Rise Up Leadership during the third Leadership Accelerator Program

partnership with Cummins makes this transformational change possible as we work toward greater equity in India and the world.” This

year marks the fifth anniversary of the Cummins Powers Women program that has been driving change and empowering women and girls around the world. The program has served more than 27 million girls and women worldwide and invested \$23 million in the effort since its inception in 2018. In India, CPW was launched in Mumbai in 2019, and has since then made significant progress in promoting gender equality through 26+ advocacy grants and implementation of four government laws and policies that have impacted over 2.2 million women and girls.

HDFC Bank to plant 3 lakh trees in Mumbai in partnership with Mumbai Port Authority

HDFC Bank, India’s leading private sector bank, announced the launch of a tree plantation drive in Mumbai. It has partnered with Mumbai Port Authority to plant approximately 3 lakh trees in the city starting with Sewri and Reay Road. This activity is in addition to the plantation of 30 lakh trees announced recently. The initiative is part of #Parivartan, HDFC Bank’s umbrella brand for environmental, social, and governance (ESG) initiatives.

The tree plantation drive was launched by Rajiv Jalota, Chairman, Mumbai Port Authority and Ashima Bhat, Group Head, CSR & ESG, Business Finance & Strategy, Administration & Infrastructure, HDFC Bank, at Mumbai Port Authority Office. Other dignitaries present at the launch event included, Shri Adesh Titarmare, Deputy Chairman, Mumbai Port Authority and Nusrat Pathan, Head - CSR & ESG, HDFC Bank. Mumbai Port Authority has made land



available in the city for the project. The project has been conceptualized with a vision to combat rising air pollution and high Air Quality Index (.) levels in Mumbai. In March 2023, HDFC Bank signed an MoU with Office of the Collector, Mumbai Suburban to plant 30 lakh trees across Mumbai city.

The large-scale tree plantation in urban locales, will significantly contribute to reducing air pollution, improving the local ecosystem and the overall biodiversity. The project is also in line with United Nation’s ‘Sustainable Development Goal’ on combatting Climate Change and the

Government of India’s ‘National Clean Air Programme.’

Speaking at the launch event, Bhat said, “Environment protection and conservation is one of the key focus areas under Parivartan. Most of the major cities of our country are facing the crisis of air pollution. Tree plantation is among the best and sustainable ways of tackling air pollution. We are happy to partner with Mumbai Port Authority in this initiative and thank them for providing the land for planting the trees. Let us come together and pledge to increase the green cover of the city.”

HDFC Bank is poised to carry out more tree plantation activities in collaboration with different institutions and Government Departments. HDFC Bank had pledged to plant 25 lakh trees on its 25th anniversary in 2020. The Bank achieved its target by planting over 25.06 lakh trees as of Dec 2022. The Bank has also committed to becoming carbon neutral by 2031-32.

Bharti Foundation supports Rajasthan Education Department in strengthening the implementation of No Bag Day initiative in 6 districts

The Bharti Foundation extended its support to the Rajasthan Education Department for strengthening the implementation of No Bag Day initiative in the government schools of six districts in the state.

Since July 2022, the Foundation has supported the efforts of state government in achieving the vision of joyful and meaningful learning, to bring out the creativity of every child in the school and decreasing the burden of school bags on them. In the Jodhpur district, as a part of review and recognition, top performing blocks (Chamu, Lohawat, Dechu, Bapini and Aau) along with 131 best performing schools of Jodhpur were felicitated for their remarkable contribution towards the success of No Bag Day initiative.

The National Education Policy (NEP) 2020 lays emphasis on the implementation of various activities in the schools for holistic development of the children. It also recommends reducing the weight of school bags on children and having bagless days in schools. Bharti Foundation has been involved in curation of variety of resources under different themes for No Bag Day in line with the guidelines of Rajasthan Education Department. Furthermore, it has been supporting the state government in the sustainable design of monitoring & review mechanism of the initiative.

While emphasizing the importance of No Bag Day during the recent felicitation event, Prem Chand Sankhla, Joint Director, School Education - Jodhpur said, "As a part of larger effort to improve the quality of learning experience in government schools, No Bag Day was



Bharti Foundation in partnership with the Education Department of Rajasthan is strengthening the implementation of No Bag Day initiative since July 2022.

The initiative has benefitted 13 lakhs+ students and 64,000+ teachers from 13,000+ government schools in six districts of Rajasthan (Jodhpur, Barmer, Pali, Jaisalmer, Jalore and Sirohi)

The Foundation has provided expertise to the Education Department in creating a roadmap for effective implementation of the initiative, curating learning activities and designing of monitoring & reviewing mechanism.

proposed for extensive implementation in the state. This innovative step promotes life skills in children while reducing the burden of school bags on them. We are thankful to Bharti Foundation for helping us strengthen the successful implementation of the initiative in the six districts of Rajasthan."

Sh. Bhallu Ram Khichad, Chief District Education Officer and Ms. Santosh, Additional District Project Coordinator graced the event with their presence.

On the occasion, Mamta Saikia, CEO-Bharti Foundation, said, "We believe that education is not just about academic learning, but also about developing important skills that will help the children succeed in their personal and professional lives. We are grateful to the Education Department of Rajasthan in giving us the opportunity to explore the potential of No Bag Day and design interventions for joyful learning experiences and holistic

development of children.” Key activities under the initiative include creating activities for monthly memos to the teachers consisting of activities to be performed on themes like Rajasthan ko Pehchano, Bhasha Kaushal Vikas, Khelega Rajasthan Badhega Rajasthan, Main Vaigyanik Banunga and Balsabha – Apno ke sath. These activities have been designed to help children learn important life skills such as teamwork, language development, creativity, scientific aptitude and

problem-solving skills. With NEP 2020’s goal of aligning India’s education system with the aspirational goals of 21st century education, providing a holistic quality education has become more important than ever.

Bharti Foundation through its Satya Bharti Quality Support Program has been supporting the government to scale up initiatives and processes in government schools at the district/state level. The key areas of intervention include

leadership empowerment of heads of schools, building life skills in students, creating an enabling environment at home through the home mentoring initiative, and effective classroom transaction through the use of teaching learning material and supporting initiatives of NEP. Bharti Foundation has implemented Satya Bharti Quality Support Program – At Scale, in over 14,000 Government schools in India impacting over 17 lakh students and more than 57,000 teachers.

United Nations Development Programme Collaborates with Infosys Public Services to Implement Oracle Fusion Cloud Applications Suite

United Nations Development Programme (UNDP) and Infosys Public Services (IPS), a US-based subsidiary of global next-generation digital services and consulting leader Infosys announced the successful deployment of UNDP’s Quantum Global Digital Management System. Quantum, based on Oracle’s Fusion Cloud Applications Suite, provides a unified and seamless platform for all UNDP business functions including human capital management, financials management, supply chain management and enterprise performance management for eight agencies of the United Nations with a user base of over 50,000 across 170 countries.

The new platform replaced all legacy systems, providing a simplified digital landscape with features like Intelligent Dashboards, AI/automation, and many self-service capabilities that transform operations and the way UNDP engages with partners, suppliers and personnel. Quantum’s improved data control and high degree of digital end-to-end process integration will lead to improved data quality and better decision support systems. In addition, UNDP will benefit from enhanced usability and end user adoption through a modern, multi-lingual and accessible user experience.

UNDP’s new digital core, largely enabled by Quantum, is one of the enabling pillars of its digital transformation strategy. This platform delivers improved results tracking, fully integrated risk management capabilities, additional automated controls and a new digital self-service platform for personnel, partners and suppliers. With the new platform, many lower-value tasks have been simplified and automated enabling the organisation to shift its focus to more strategic tasks, resulting in a continued boost in productivity.

Sylvain St-Pierre, Chief Information Officer, UNDP said “Digital technology will allow us to rapidly evolve with the ever-changing development needs of people and our planet. Our previous systems were difficult to change and often made it challenging to adapt to changing global development needs and world events. This new digital core represents a quantum leap forward that enables UNDP with a modernized, integrated platform, allowing for truly transformative digital capabilities combined with a first-rate digital user experience. Quantum, our new digital corporate management system implemented with Infosys Public Services, underpins a #FutureSmart UNDP that leaves no one behind.”

Steve Miranda, Executive Vice President, Applications Development, Oracle said “With a physical presence in 177 countries around the world, the UN Development Programme operates at massive scale. Using Oracle Fusion Applications for finance, HR, and supply chain will help UNDP to consolidate systems and embrace automation to increase efficiency and ultimately use less resources to deliver more value to its global constituents. We’re proud to be working with Infosys Public Services to help UNDP optimize its processes and better deliver on its critical global mission.”

Bhanu Prasad Narayana, Interim CEO and AVP, Infosys Public Services, said, “We have been proud partners of UNDP since 2013 and are thrilled to have the opportunity to move UNDP into the cloud era. Oracle Fusion Applications provide UNDP and its partner agencies with a complete suite of SaaS applications, and we are proud that IPS delivered the program on schedule, with zero disruptions, even amid the pandemic. Our comprehensive Oracle Cloud solutions and capabilities, and the power of Infosys Cobalt offerings are enabling us to accelerate cloud transformation priorities for our public sector clients and help deliver exceptional outcomes.”

Rohini Nilekani Philanthropies Grants Rs 100 Crores to NIMHANS and NCBS

Rohini Nilekani Philanthropies announced a grant of Rs. 100 crores to the National Institute of Mental Health and Neurosciences (NIMHANS) and the National Centre for Biological Sciences (NCBS) to set up the 'Centre for Brain and Mind'.

The Centre will further cutting-edge research to understand the causes, correlates, and course of five major illnesses - schizophrenia, bipolar disorder, obsessive-compulsive disorder, dementia, and addiction, and explore potential interventions and treatments for them.

Under this MoU, Rohini Nilekani Philanthropies Foundation, founded by philanthropist Rohini Nilekani, will support the activities of the 'Centre for Brain and Mind' (CBM) for five years starting April 2023.

Over five years, CBM will simultaneously pursue two tracks - long-term research and building capacity for both research and practice in the mental health field.

Approximately 193 million people in India suffer from various forms of mental illness, and there is a need to find better ways of diagnosis and clinical management for many of these disorders. This multidisciplinary, inter-institutional partnership between NIMHANS and NCBS (with inStem) will contribute greatly to the broader field of mental health.

Commenting on the grant, Rohini Nilekani, Chairperson, Rohini Nilekani Philanthropies, said:

"Mental health is an area that demands more attention and support. The recent pandemic brought out this need even more starkly. Through this grant, I hope that a collaboration between two apex institutions of this country will provide globally relevant insights, evidence and pathways for better treatment for millions of people in India and

The grant will support the establishment of the 'Centre for Brain and Mind', which will enable long-term research and practice to provide relief to patients diagnosed with schizophrenia, bipolar disorder, obsessive-compulsive disorder, dementia, and addiction.

the world. The Centre for Brain and Mind hopes to build an ecosystem for the larger community of mental health practitioners. Its research on five critical disorders, which will no doubt be pathbreaking, will be open-sourced to allow more innovation in both academics and practice. I wish the Centre all success and hope it becomes a global hub for sharing knowledge in the years to come."

Since 2016, NIMHANS, along with NCBS and inStem, have been collaborating on a project (then supported by the Department of Biotechnology and Pratiksha Trust), to build a research platform for facilitating discovery of better solutions for mental illness. The research platform is now ready to drive discovery in this area and will be housed at the Centre for Brain and Mind, which will be co-located at NCBS and NIMHANS.

This new grant will strengthen the existing practices, allow the database and repository to become open source, and reach its potential of maximum utilisation by scientists all over the world. The capacity-building component of CBMs work will entail better methods of public engagement, as the Centre will do public facing interventions around severe mental illness to reduce stigma and enhance awareness. It will also devise actionable measures to address causes that lead to vulnerability in developing mental illness or

ameliorate the progression of disease in those who have developed an illness. By developing a core group of clinician researchers and basic scientists skilled in critical technologies and novel methods, the Centre will also establish a pipeline of younger researchers to carry forward this long-term enquiry.

Speaking about the potential of this grant, Dr Pratima Murthy, Director, NIMHANS, said: "NIMHANS has been collaborating with NCBS and inStem to study a large number of families of patients with severe mental illnesses and generate a longitudinal cohort. The in-depth biological and clinical assessment of this cohort has immense potential for breakthrough discoveries, with implications in turn for translation into better care for persons with mental illnesses. We are delighted to house at NIMHANS the Centre for Brain and Mind, which will allow us to carry forward and expand this important research. We are thankful to Rohini Nilekani Philanthropies for supporting this important initiative that is long-term and visionary."

Prof. LS Shashidhara, Director, NCBS-TIFR commented, "NCBS-TIFR, along with NIMHANS and inStem, has built a platform to facilitate discovery science that leads to better solutions for mental illness. The financial support from Rohini Nilekani Philanthropies will allow us to pursue long-term research on patients. This will allow insights into mental illness and how it develops and impacts brain function. Such understanding will enable the development of novel medicines. We are grateful to Rohini Nilekani Philanthropies for their generous grant to boost our research." An inaugural program for the Centre's launch is being planned in the next few months.

IndoSpace establishes Cutlery Banks to promote sustainable waste management in two villages in Maharashtra



IndoSpace, India's leading developer and owner of Grade A industrial real estate, has launched a sustainable solution to promote zero waste events by establishing a reusable Cutlery Bank each in the Gram Panchayats of Mahalunge Ingale and Bhamboli villages, near Pune's Chakan area. The initiative, conceptualized in alignment with recent government reforms against single-use plastic, is an extension to IndoSpace's steadfast commitment to reducing waste generation stemming from community events.

Plastic cutlery used during events is typically discarded after a single use, following which it ends up in landfills – adding to the rising



landfill crisis. This can impact the environment in numerous ways, including potential groundwater and soil contamination which then leads to adverse health effects. The cutlery bank initiative is aimed at minimizing waste generation during community events by replacing single-use items with reusable ones

made of steel. Cutlery made from stainless steel can be reused for decades before it needs to be replaced. Even then, these can be melted and molded to create new steel items. Encouraging the use of reusable cutlery not just aligns with the principles of a circular economy, but also embodies the organization's goal of raising awareness on the detrimental effects of single-use plastics/disposable waste.

Rajesh Jaggi, Vice Chairman - Real Estate, Everstone Group said, "As a company, we are dedicated to practicing and promoting sustainable waste management, which is a core focus area for our CSR activities. The cutlery bank initiative marks a significant step in our sustainable waste management project being run at Chakan over the last 2.5 years. We hope that this initiative will serve as a model for other communities and villages to adopt sustainable practices and promote zero-waste events. We believe that this launch will create acknowledgement towards today's pressing issues and help generate well-adapted solutions for the future."

The cutlery will be stored in the Gram Panchayat offices managed by the villages' temple staff. For maximum utilization, the cutlery will be used for all village events. To raise awareness on the importance of adopting a sustainable lifestyle among villagers, they will be given the utensils from the bank free of cost, while being encouraged to donate to the Gram Panchayat. In addition to bringing about a behavioral change, this initiative will work towards reducing almost 1 tonne of plastic waste from events held in both villages. As part of the campaign, 1200 cutlery sets were donated to the Gram Panchayat in Bambholi and 2000 in Mahalunge Ingale. IndoSpace continues to be a torchbearer of community building and sustainability through its environmentally conscious decisions.



Verizon India and Nirmaan Organization launch first-of-its-kind Mobile Career Counselling Lab in Telangana

Verizon India, an IT & Technology GCC (Global Capability Centre) in association with Nirmaan Organization, a Hyderabad based NGO launched a Mobile Career Counselling Lab (MCL), a first-of-its-kind initiative in Telangana, equipped with digital infrastructure and technology-based applications to offer end-to-end counselling support to students in rural India.

A similar Mobile Career Counselling Lab (MCL) has been operational in Karnataka for more than a year now and has already supported more than 10,700 students. Marking the inauguration of this initiative in Telangana,

the MCL van was flagged off today at a Government School in Hyderabad by Mr. Vijayaraman Subramanian, Vice President & Managing Director, Verizon India and other senior management team members from Verizon India along with key representatives from Nirmaan Organization including Mr. Mayur Patnala, Founder & CEO, Ms. Uma Kesani, Co-CEO, Ms. Anuradha Pulla, COO, Mr. Nikhil Gampa, Partnerships Lead and Mr. Srihari, Operations Lead-Nirmaan Organization and Mr. Niranjan, Head Master, Zilla Parishad High School, Manikonda.

The mobile counselling lab encompasses personal and tele

counselling services, psychometric tests, technological infrastructure and mobile applications to equip the aspirants to self-explore and seek out a clear path for a better future. It also offers helpline services, which can be utilised by aspirants to garner any further clarifications that they may have regarding their career prospects. Starting out its journey from Hyderabad, this 'Career Counselling on Wheels' initiative in its first year in the region will conduct about 150-200 sessions reaching out to over 10,000 students and youth in about 6-9 remote districts of Adilabad, Asifabad, Mancheri, Bhupalpally, Mulugu, Kothagudem, Khammam, Nalgonda, Nagarkurnool

in Telangana. Subsequently, plans are to expand the MCL initiative to other districts, across Southern states and eventually to all parts of the country.

Highlighting the importance of the project, Vijayaraman Subramanian, Vice President & Managing Director, Verizon India, said, “At Verizon, we are committed to creating meaningful impact in the communities we operate in, and are thrilled to partner with Nirmaan to launch this unique initiative in Telangana. By bridging the digital divide for students and empowering youth in rural areas, we believe we can unlock tremendous potential and help build a brighter future for all. We are proud to bring our experience and expertise to this project, building on the success of a similar initiative we had launched in Karnataka a while back, impacting the lives of 10,700 plus youth. Together with Nirmaan, we are excited to make a real difference in the lives of young people and their communities.”

The launch of Mobile Career Counselling Lab re-affirms this commitment as we aim to bring about a positive change with the power of technology.”

Highlighting the unique aspects of this initiative, Mayur Patnala, CEO, Nirmaan Organization, “We thank Verizon India for this continued support in expanding the Mobile Career Counselling Lab to Telangana after supporting us in Karnataka. This association will help us to take the MCL program across multiple remote districts. Our aim is to help these students, get access to right information and guidance on various career related aspects. Counselling sessions will be conducted by well-trained career counsellors who will be part of the lab throughout the journey”.

“Students can also reach out through the Nirmaan Vidya helpline to get all their queries answered. We aspire to support 10,000 students to

get access to right information on careers, enrol students and youth for courses, training institutes, colleges, jobs and scholarships with the help of the career lab”, he added.

Due to the lack of internet penetration in the interiors of rural India, many students from these regions do not have access to information or the relevant platforms for guidance on how they can explore further education or career opportunities. Results from a need assessment survey conducted by the Nirmaan

with mobile apps and psychometric assessment including space for personal counselling. The van will be on the move from an identified site to another, enabling students to connect to a tele-counselling center with a toll-free helpline 18004252425 for queries.

The lab also has a TV screen where the counsellors will conduct career workshops and showcase audio and video files for better understanding. Students can self-explore the digital infra-available and can



Organisation brought to the fore some key findings like low career aspirations and lack of awareness amongst these youngsters as nearly 77% of the respondents took random decisions as there was no one to guide, many were aware only about 5 or less than 5 career choices, and most of them being unaware of a single scholarship and unable to apply for any. This unmet need is what spurred the idea of the mobile career counselling lab to help provide access and support to the young aspirants from the rural hinterland.

The mobile counselling lab is equipped with 10 Tablets installed

also enrol themselves in a career outreach program where they can get all the updated information on various career opportunities.

With the support of government departments, local NGOs and village leaders, the mobile lab will be visiting schools, gram panchayat offices and will be stationed at places where people can benefit the most. To ensure sustainability of this initiative, Nirmaan will also be identifying and building Career Mitras in these villages and empower them with latest information and tools who in turn can support the young aspirants in their learning journey.

Walmart Foundation Expands Efforts to Support Smallholder Farmers in India, Further Empowering Women

New grant commitment aims to reach 1 million farmers by 2028 with at least 50% women

Expanding its commitment to improving farmer livelihoods in India, Walmart Foundation on Wednesday announced a new five-year strategy that aims to reach 1 million smallholder farmers by 2028 with at least 50% women. The grants will be extended to non-profit organizations working in the areas of collectivization and farm aggregation with the aim of boosting farmer incomes across several states including Uttar Pradesh, Karnataka, West Bengal, Maharashtra, Andhra Pradesh and Odisha.

The Walmart Foundation grants will focus on enabling local grantees to better support capacity building for farmer producer organizations (FPOs), expanding access to market linkages so that they can participate in commercial opportunities more seamlessly, and training farmers on sustainable farming methods and technology, with a particular focus on empowering women farmers.

The Foundation announced two new grants alongside the new five-year strategy; they include:

- \$3 million to TechnoServe for smallholder farmers in Maharashtra and Andhra Pradesh aiming to reach 24 FPOs and 30,000 farmers, with 50% of them expected to be women.
 - \$533,876 grant to Trickle Up aiming to reach 1,000 women smallholder farmers in Odisha, connecting them with two FPOs.
- This five-year strategy is



Kathleen McLaughlin, Executive Vice President and Chief Sustainability Officer, Walmart Inc. and President, Walmart

an extension of the Walmart Foundation's investments since 2018 to improve farmer livelihoods in India and expand their access to commercial goods markets. Surpassing its initial goal of \$25 million invested, the Walmart Foundation has funded philanthropic grants supporting smallholder farmers in India totaling just over \$39 million through 24 grant programs with 16 grantees. Grants span the states of Andhra Pradesh, Uttar Pradesh, Telangana, Karnataka, Odisha, Jharkhand and West Bengal, Maharashtra, and Madhya Pradesh.

Through these investments, Walmart Foundation grantees project they will cumulatively support over 800,000 smallholder farmers. Of those grantees reporting on gender, more than half of the farmers reached are expected to be women. This new commitment reaffirms the

Walmart Foundation's work to expand market access for smallholder farmers across India by leveraging its scale, networks and strategic philanthropy. As the new set of grants starts to roll out later this year, they will build on the results of a new impact study conducted by Sambodhi, an India-based impact measurement firm, that assessed the efficacy of Walmart Foundation's investments thus far in enhancing livelihoods and incomes for Indian FPOs. The study examined a number of initiatives put forth by NGO grantees in the area of FPO capacity building and indicated that interventions by implementing partners contributed to strengthened systems and processes at the FPO level, higher revenues and profitability as well as increased representation of women at the farm level and in FPO leadership.

Industry quotes

TESCO Business Services is a leading multinational retailer with over 360,000 employees globally. Tesco Bengaluru professionalizes its capability through best-in-class automation & a continuous improvement culture that leverages the scale to execute as a global function supporting all the markets worldwide. TBS delivers 8 out of 10 core business processes for the Tesco group from India. Around 80% of key functions like coding, engineering, and developments are done by the technology team based out of Bengaluru. As a multi-disciplinary organization with its presence in Bengaluru, Central Europe, and the UK, it aims to create a sustainable competitive advantage for Tesco by standardizing processes, delivering cost savings, enabling agility, and empowering colleagues to do even more for their customers.

As we approach World Earth Day, I would like to share industry quotes on the same. Please find the quotes below:

"In 2021, the Tesco Group purpose was revised after an extensive and exhaustive process. 'Serving our customers, communities and planet a little better every day' is a reflection of our commitment to a sustainable future. It is therefore imperative for all our actions and endeavours, not just our CSR activities, to align with our global purpose. There is no question whatsoever that we are at an inception point in history as climate change is the single greatest challenge we now face. Waste management has been at the forefront of many a conversation, not just in Bangalore but in the world at large. TESCO's Corporate Social Responsibility project 'ReWare' along with Samarthanam Trust for the Disabled, aims to bring about a behavioural change in citizens by sensitizing them towards segregation of waste at source, to enable better recycling to reduce the amount of waste that end up in landfills.

ReWare focusses on 5 wards comprising 75,000 households or 3,00,000 individuals - Garudacharpalya, Kadugodi, Hagaduru, Hongasandra and HSR. The project also collaborates with BBMP to train waste workers and rag pickers to improve the waste collection system, covering all segments such as households, schools, hospitals and commercial establishments. Trading of recyclable waste material is a source of income for waste workers and rag pickers and better segregation of waste, improves their livelihood. We have impacted over 28,000 households across these 5 wards till date and continue to strive to build the circle of change in the communities we serve. BBMP has also recognised and certified the Mahadevpura ward for bringing about behavioural change in the community through our solid waste management program."



NIMMI SEBASTIAN
Head, Corporate Brand and
CSR, Tesco Business Services
and Tesco Bengaluru



MANISH SETHI
Director, Property, Tesco Business
Services & Tesco Bengaluru

"On this World Earth Day, we continue to stay committed to reducing environmental impact and promoting sustainability in everything we do. From sourcing materials responsibly to minimizing waste and reducing carbon emissions, we strive to be good citizens of the Earth. Over the last 6 months at Tesco Bengaluru, we have increased our solar consumption from 85% to 96%, leading to a 62% reduction in CO2 emissions from grid power consumption, reduced water consumption by replacing aerators in hand-wash taps and changing the flushing mechanism, transitioned our fleet of transport vehicles with electric vehicles with an aim to have 100% EV vehicles in next 18 months, reduced the direct reject waste from 5% to 0.4% and reduced the disposable plastic cover usage by 90%.

While our planet continues to face numerous challenges, including climate change, deforestation, loss of biodiversity, pollution, and depletion of natural resources, these issues significantly impact human health, food security, and economic development. They require immediate action to address them. Together, we can create a more sustainable future for ourselves and future generations. Let us all do our part to protect the planet we call home."

CLIMATE CHANGE COMPOUNDING INEQUALITIES FACED BY WOMEN IN AGRICULTURE, FAO SAYS

Women working in agriculture ‘tend to do so under highly unfavourable conditions’ – often in the face of ‘climate-induced weather shocks and in situations of conflict,’ a new report from the UN Food and Agriculture Organization (FAO) concludes.

Yanine Quiroz writes about the new report.

The report provides insight into women's participation in agrifood systems at every step of the chain, from production to consumption. It comes more than a decade after the last publication of its kind by the FAO.

Agriculture and food systems are a significant employer for women globally – and are a more critical source of livelihood for women than for men, the report says.

However, women face inequalities that constrain their full participation in the sector, it warns. They are likely to work under worse conditions than men, taking informal, part-time, labour-intensive and low-skilled jobs at higher rates, and earning 82 cents for every dollar men earn.

Climate change and the Covid-19 pandemic have also affected women's productivity in agrifood systems, the report notes. For example, women are less likely than men to see their work demands decrease during periods of extreme heat.

Addressing inequalities and empowering women would improve their well-being and that of their households, the report says. Doing so would also reduce hunger, increase incomes and strengthen resilience.

Despite this, the authors warn that few national policies have specific targets to address women's inequalities in agrifood systems. And while national climate pledges under the Paris Agreement have seen a “modest improvement” on gender equality and women's rights over the past decade, inclusion of these issues is “often superficial”.

Here, Carbon Brief summarises the key messages from the FAO's landmark report.

WOMEN'S ROLES

The new report, *The Status of Women in Agrifood Systems*, is “much broader” than the FAO's previous work on gender, says Dr Lauren Phillips, the deputy director of the FAO's inclusive rural transformation and gender equality division. The 2011 report focused on women in agriculture alone.

Phillips, one of the lead authors of the new report, tells Carbon Brief

that, in contrast, the new iteration covers all agrifood systems and all phases of production, with data disaggregated by gender. The new report also delves into the importance of women's empowerment in these sectors.

As defined by the FAO, “agrifood systems” refers to the entire range of actors and their activities linked to the production and consumption of both food and non-food agricultural products. This includes products derived from agriculture, livestock, forestry, fisheries and aquaculture.

Overall, the world produces around 11bn tonnes of food annually, and about 4 billion people live in households that depend on this sector for their livelihood.

Such systems are constantly changing and are impacted by economic, social and environmental factors, including – increasingly – climate change. The new report says that women play a range of roles in

agrifood systems, from farmers to wage workers and entrepreneurs. Women also often carry out unpaid activities, such as subsistence farming to feed their families.

Globally, men are more commonly employed in agrifood systems, with 38 per cent of working men employed in such roles, compared to 36 per cent of working women.

But in sub-Saharan Africa and in many south-east Asian countries, such as Cambodia, Vietnam and the Lao People's Democratic Republic, women make up half of the agricultural labour force.

As the chart below illustrated, globally, women (purple) make up 38 per cent of agrifood system workers, while men (orange) make up the other 62 per cent.

Even within a single region, countries vary in their share of women in the agrifood systems labour force. Although women make up only 36 per cent of agricultural workers in Latin America and the Caribbean as a whole, they are 54 per cent of such workers in Bolivia.

Agri-food systems provide many jobs for women and men alike, but both have observed a decline of nearly 10 percentage points in agrifood system employment since 2005. This decrease is due to a reduction in employment in the primary agricultural sector, while employment in off-farm activities – such as food storage, transportation, distribution, marketing or consumption – has remained generally steady.

Where women's involvement in agriculture has increased, this is sometimes taking place “where the economic viability of agriculture

There's been positive change so far that more and more countries acknowledge women in their national policy frameworks around agriculture, but not many of them are necessarily proposing specific and concrete actions.

**DR LAUREN PHILLIPS,
Deputy Director, UN Food and
Agriculture Organization**

is diminishing because of climate change and other stressors”, the report notes.

One of the report's main findings is that agrifood systems are a more significant source of livelihood for women than for men in many countries. For example, in southern Asia, 71 per cent of women work in the agrifood sector, compared to 47 per cent of working men. However, there are much fewer women in the labour force in general in that region. The report also describes the range of agrifood activities in which women are involved.

Women make up 50 per cent of workers in the aquatic sector – aquaculture and fisheries – and 40 per cent in small fisheries, which includes traditional fishing to obtain small amounts of food and is often carried out by families. However, they hold only 15 per cent of the full-time positions in these primary sectors, while holding 71 per cent of the part-time jobs in processing, making their employment “more precarious”, the report says.

Moreover, it adds, women “tend to trade in medium-to-low-value species and in smaller volumes and are frequently excluded from the most lucrative value chains”.

A similar situation prevails in live-stock production. Although there is a lack of specific data on women's share in the livestock industry, “women continue to be disadvantaged in livestock ownership”, the report says. For example, men traditionally own the most profitable live-stock species, such as cattle, camels and buffalo.

Conversely, women typically control less-profitable livestock breeds such as poultry and small ruminants.

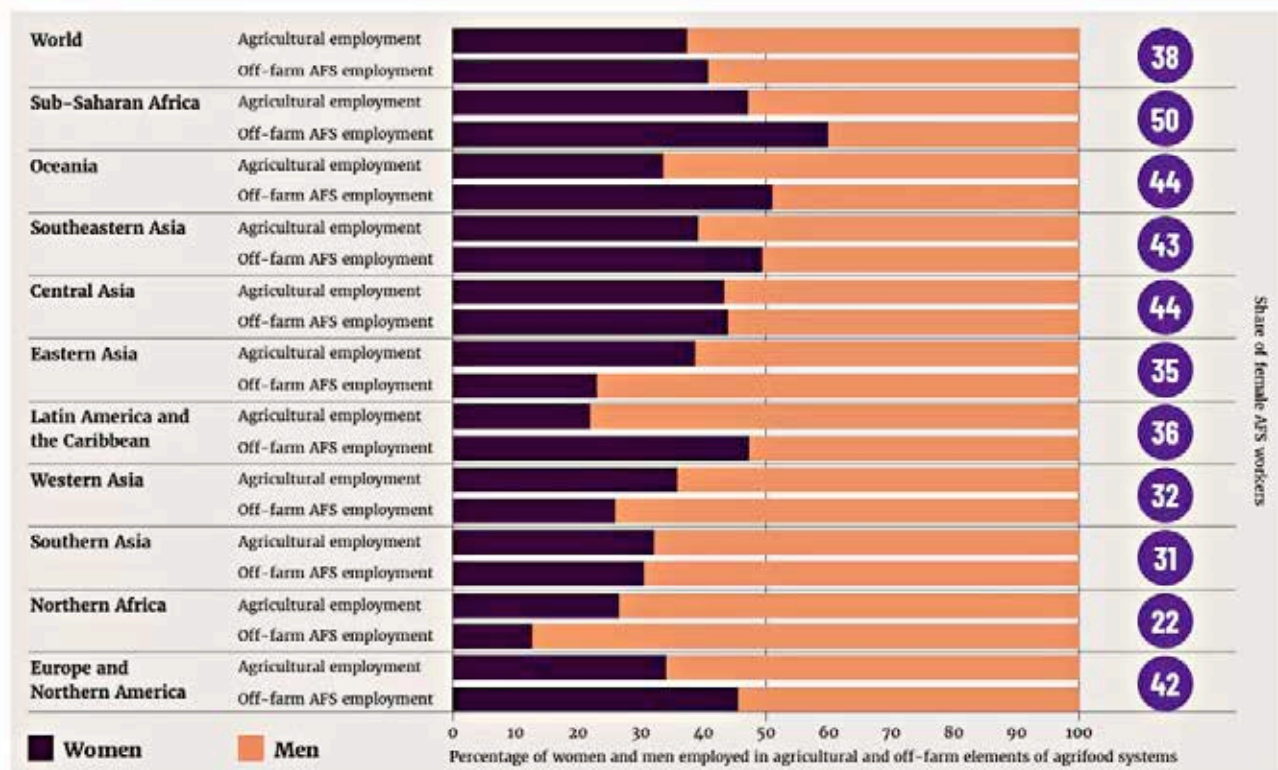
The report notes that “livestock ownership is important for reducing poverty among women”, adding:

“It also helps to increase household resilience to climate change and associated shocks. Women who have access to and control over livestock have a higher capacity to improve the health, education and food security of their households.”

REMAINING BARRIERS

Women face several barriers that jeopardise their full participation in agrifood systems, the report explains. Besides having worse working conditions than men, women deal with high demands of unpaid care, as they often also spend time cooking, cleaning and caring for their families, as well as collecting water in rural areas. All of this “contributes to inequalities in labour market participation” and limits “their opportunities for education and employment”, the report says.

The share of women and men in total agrifood-system employment, and by subcomponent of agrifood systems in 2019



The share of women (purple) and men (orange) in agrifood system employment, broken down by regions and types of activity: agricultural (top bars) or off-farm (bottom bars). Overall, women make up almost 40% of all workers in agrifood systems, but this percentage varies widely across regions. Source: FAO (2023)

As a result, women in agriculture have lower wages than men: they earn 82 cents for every dollar men earn.

Furthermore, women in the world's lowest-income countries are more likely to work in agrifood systems than women in higher-income countries. They often work in family agriculture and under extreme climate conditions, and are less likely to be entrepreneurs.

That has led to a crop yield "gap" of 24 per cent between female- and male-managed farms of the same size, according to the FAO report.

Limited access to essential resources for agrifood systems, such as land tenure, services, finance and digital technology, is another barrier that women face. Women also have less access to improved seeds, fertil-

isers and farming equipment than men, the report says.

The number of men who own agricultural lands is twice that of women. However, women have increased their land ownership in 10 countries over the last decade, primarily in sub-Saharan Africa and southern Asia.

The report highlights that "discriminatory social norms and rules" are significant drivers of gender inequality, adding that these are "slow to change". Examples of such norms include the expectation in many places that women and girls will perform unpaid domestic labour, which limits the amount of work they can do outside the home.

The report says that the Covid-19 pandemic had a "greater negative impact on women's livelihoods

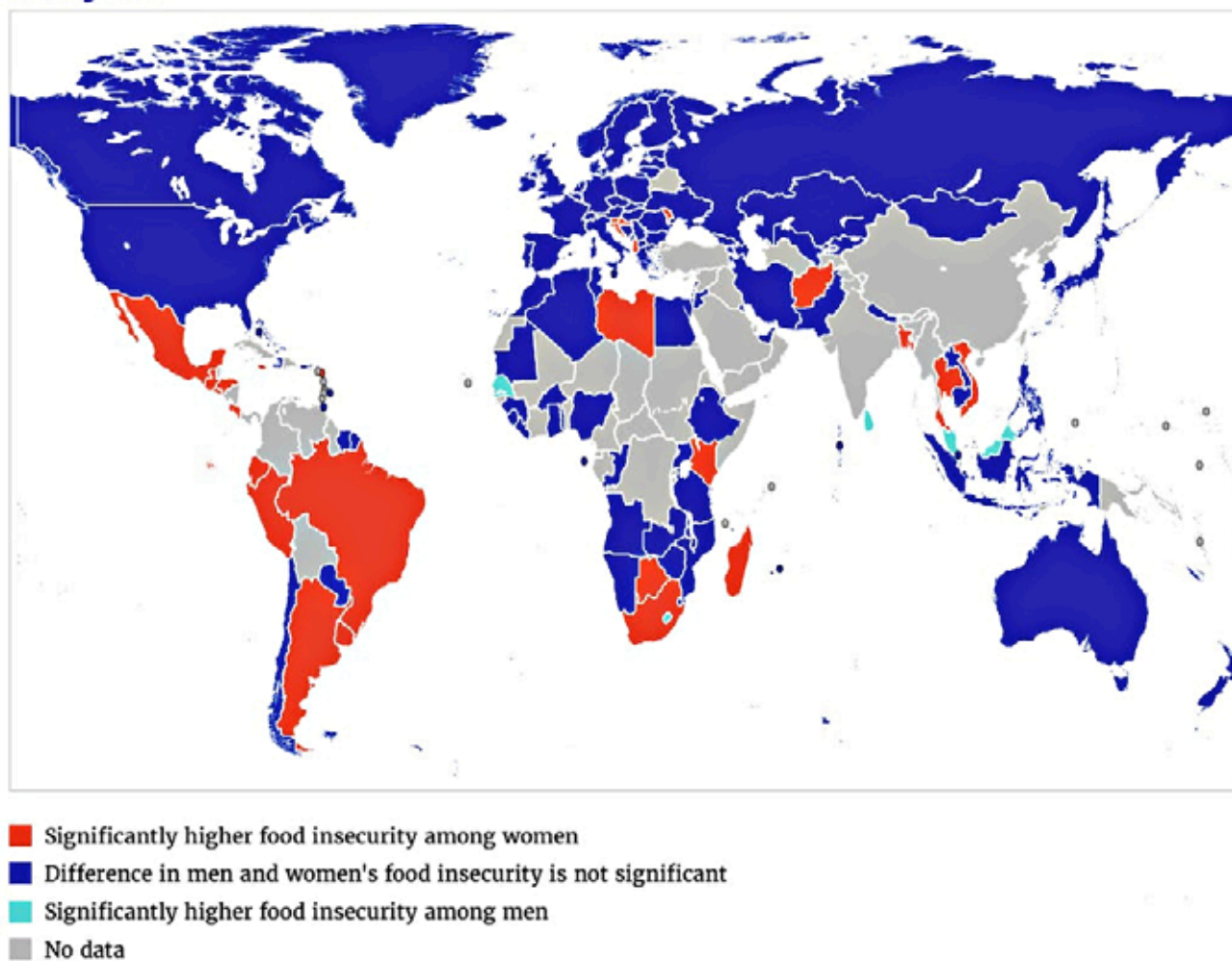
in agrifood systems than they do on men's". During the pandemic, women suffered the most from food insecurity and lost more jobs (22 per cent) than men (2 per cent).

Similarly, climate change and extreme weather events disproportionately affect women. Studies have also shown that addressing gender-based inequalities is important for climate resilience.

Climate change also affects women's capacity to adapt. For example, discriminatory norms can reduce women's access to climate information, which is crucial to understand how to adapt to global warming.

At least 939 million women aged 15 or older experienced moderate to severe food insecurity in 2021, compared with 813 million men, the report says. The map below

Figure B Many more countries show significantly higher food insecurity among women than among men



Countries with higher food insecurity among women (red) and men (turquoise). Blue indicates countries where food insecurity does not significantly vary between women and men. Source: FAO (2023)

displays the countries with higher food insecurity among women (red) and men (turquoise), with blue indicating countries that do not have significantly different rates of food insecurity between men and women. Countries with higher levels of food insecurity for women are concentrated in Latin America and the Caribbean, Africa and south-east Asia.

The report also notes that women in rural areas, “who have limited resilience capacity and consequently restricted options to respond to changes in climate, often have to

resort to short-term coping strategies at the expense of their long-term resilience to climate shocks and stressors”. In India, for example, “women often resort to decreasing the number and size of meals they consume during droughts, with negative effects to their overall health”.

EMPOWERING WOMEN

The report offers a snapshot of how social norms are changing over time and how they create inequalities in agrifood systems, but it also provides an overview of the policies that have been successful in either

closing gender gaps or empowering women, Phillips says. It highlights that tackling gender inequalities and empowering women in agrifood systems will reduce hunger and poverty, boost economies and strengthen resilience to pandemics and climate change. It says:

“Reducing their barriers to their participation and changing the norms and rules that constrain it has great benefits for women’s well-being and for wider society as a whole.”

For example, closing the gender gap in farm productivity and the

wage gap in agrifood systems would boost the global economy – increasing global gross domestic product by 1 per cent (nearly \$1tn) – and alleviate food insecurity for 45 million people.

The report also emphasises that projects empowering women bring higher benefits than those that only mainstream gender.

Mainstreaming gender means integrating both women's and men's concerns into the planning, development and implementation of a project, so that everyone can benefit equally.

Women's empowerment, on the other hand, means providing women with the capabilities, rights and resources to make their own decisions, thus transforming discriminatory social norms that perpetuate inequalities. For example, Phillips says, a project might ensure that women have appropriate mobility so they can easily travel from their homes to their work.

The authors estimate that if half of the small-scale producers benefited from projects that support women's empowerment, it would increase the income of 58 million people and the resilience of 235 million people worldwide.

However, the world is not yet on that path. The report notes that while “more than half of bilateral finance for agriculture and rural development already mainstreams gender, only 6 per cent treats gender as fundamental”.

It cites several international agreements that address gender equality, such as the Sustainable Development Goals, which call for gender equality and empowerment for all women by 2030.

Gender-transformative actions are considered a solution to change discriminatory norms that affect women in agrifood systems. The report observes that “such approaches are cost-effective and have high returns”.

For example, interventions that improve women's productivity are more successful when they alleviate women's unpaid work demands, such as by providing access to childcare.

Such gender-transformative approaches can make a change at the local level, but they need to be deployed at a much larger scale in order to change social norms more broadly, Phillips tells Carbon Brief. She adds:

“There's been positive change so far that more and more countries acknowledge women in their national policy frameworks around

changes, “national agricultural and environmental policies that mention gender-related vulnerabilities to climate change often still do not include policy measures or strategies to address them during implementation”, it says.

Phillips notes that some countries of sub-Saharan Africa and Latin America have increased their budgets for implementing policies addressing gender and inequality. Sub-Saharan Africa is the region with the highest number of such policies. She says:

“If policies were already responsive, and included women in policy

If policies were already responsive, and included women in policy processes, they're much more likely to help women withstand shocks and to be resilient to shocks when they arrive.

agriculture, but not many of them are necessarily proposing specific and concrete actions.”

This is reflected in climate policies, the report says, noting a “modest improvement” over the past decade “in the degree and way in which gender equality and women's rights issues are introduced in climate-related policy”.

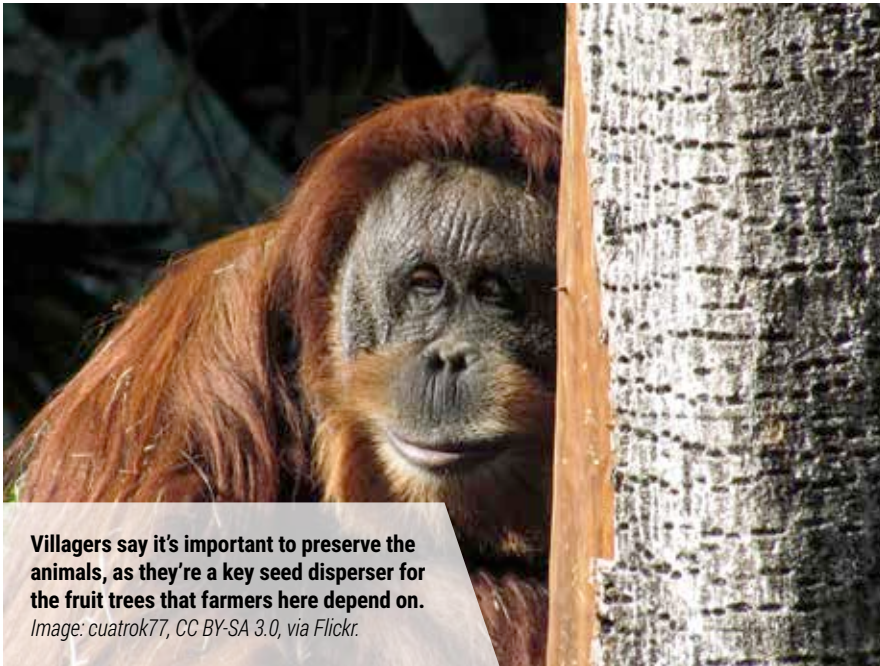
For example, the report cites a 2021 review of national climate pledges under the Paris Agreement, where the percentage of reviewed pledges with mentions of women and/or gender increased from 40 per cent in 2016 to 78 per cent in 2021. The report says that “agriculture was the sector with the greatest degree of integration of gender”. However, despite some positive

processes, they're much more likely to help women withstand shocks and to be resilient to shocks when they arrive.”

However, the report warns that “evidence from Central America, east Africa and Nepal indicates that integration of gender equality and women's rights issues in national climate and agriculture policy is often superficial, with passing mention of ‘gender’, often merely acknowledging its relation to climate change”. □

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(Source: <https://www.eco-business.com/news/climate-change-compounding-inequalities-faced-by-women-in-agriculture-fao-says/>)



Villagers say it's important to preserve the animals, as they're a key seed disperser for the fruit trees that farmers here depend on.

Image: cuatrok77, CC BY-SA 3.0, via Flickr.

Orangutan sightings rise amid habitat loss due to Sumatra dam construction

Villagers in the Batang Toru forest in northern Sumatra say orangutan sightings in their farms and settlements have increased recently, write **Hans Nicholas Jong**, Tonggo Simangunsong

With fewer than 800 individuals remaining in the wild today, the critically endangered Tapanuli orangutan isn't just the most threatened great ape species in the world — it's also one of the most elusive.

They're so rare that even the people living in the Batang Toru

forest, in the Tapanuli region of northern Sumatra, have rarely seen one. Scientists say it can take weeks in the field to spot just a single Tapanuli orangutan (*Pongo tapanuliensis*) here, the apes' only known habitat. The fact that they dwell high in the trees, seldom descending to the ground, makes it even more difficult to catch sight of the orangutans.

But that's not the case for 66-year old Bullah Hutasuhut, a farmer in Batang Toru.

He said Tapanuli orangutans have been coming into the villagers' farms nearly every week now.

"In the past, the orangutans sometimes came [to the farms], but not as frequently as now," Bullah told Mongabay when we visited his home village of Sitandiang last September.

In Luat Lombang, another village in the Batang Toru forest, it's the same story: more orangutan sightings than ever before. Muara Siregar, the Luat Lombang village chief, said sightings are especially common when the durian fruit is in season.

Residents of the villages of Dolok Nauli and Hutaimbaru, also in Batang Toru, had never before seen orangutans, but now the animals are appearing increasingly often, according to Julius Siregar, an orangutan conservationist with North Sumatra-based environmental NGO Foundation for Sustainable Ecosystem (YEL).

"They said they only heard about orangutans from their grandparents, but now they've been seeing [orangutans] more often near their villages," he told Mongabay.

Both Bullah and Muara said the growing presence of orangutans became particularly noticeable since the start of construction of a hydropower dam in the Batang Toru forest. The \$1.6 billion project, part of the Chinese-backed Road and Belt Initiative, was meant to go into operation in 2022, but has been delayed to 2026 because of pandemic-related delays.

Construction of the power plant is underway, with Indonesian state-owned explosives company PT Dahana blasting out a 12.5-kilometre (7.8-mile) main tunnel and 2.7 km (1.7 mi) of secondary tunnels that will channel water from the Batang Toru River to the turbines. A series of tunnel collapses at the project site

has killed 17 workers in the space of less than two years.

“Before the project [started], there were no [orangutan sightings],” Muara said. “We had to travel deep into the forests to see them, and we could only see their nests. [Now] they come to the settlement. How could they [stay in the forest] when there’s heavy equipment there?”

Julius agreed that the frequent sightings of Tapanuli orangutans are likely driven by forest clearance, which pushes the apes out of their habitat and into human settlements and farms.

But he said the hydropower project isn’t the only cause of deforestation in the area; the forest is also being cleared for homes and for pulpwood plantations.

Rudi Putra, the North Sumatra provincial wildlife conservation head, said deforestation by companies has largely stopped in the Batang Toru area, with these same companies now focused on rehabilitating the forests in their concessions. He cited the Batang Toru dam as an example.

According to Rudi, dam developer PT North Sumatera Hydro Energy (NSHE) has finished its land-clearing activities and is now building infrastructure on the cleared land. At the same time, it’s rehabilitating areas that it no longer needs for the operation of the 510-megawatt power plant, he said.

Conservations have warned that the power plant could devastate the most critical areas of the Batang Toru ecosystem, thus jeopardizing the connectivity between the orangutan populations in the west, east and southeast of the area. This fragmentation would dramatically cut the diversity of the ape’s gene pool, leading to inbreeding, disease, and the eventual extinction of each subpopulation.

The risk of this happening has prompted major lenders, including the World Bank’s International

Financial Corporation and the Asian Development Bank, to steer clear of the hydropower project.

Despite calls from conservationists for China to withdraw its support for the project, the State Development & Investment Corporation (SDIC), China’s largest state-owned investment holding company, purchased the dam in 2021.

NSHE, the dam developer, didn’t respond to Mongabay’s requests for comment.

Growing awareness

Even though anecdotal evidence suggests a growing presence of Tapanuli orangutans in villages, Rudi said the number of official reports has actually declined.

Since last September, the provincial wildlife conservation agency has received just a single report of orangutan sighting, he said. But this doesn’t mean there are no more cases of orangutan entering locals’ farms, Rudi added. In fact, it may be the opposite: orangutan sightings in farms may have become so common that people have gotten used to them and no longer see the apes as a pest, Rudi said.

This might also indicate growing public awareness of the importance of protecting orangutans, he added.

In the case of the single official report, the conservation agency deployed a team to capture the sighted orangutan and relocate to a part of the forest where it could find food. Relocation is only done when orangutans have been spotted in a human area for more than two weeks running, Rudi said. He described it as a win-win solution, as leaving the orangutans to frequent the farms could lead to an escalation of conflict between the apes and the villagers. Farmers like Julius say they’re aware of what they stand to lose if the orangutans are driven out of the area.

“The durian harvest nowadays isn’t as good [as before] because

the forest is being cleared,” he said. “Often the locals don’t know that orangutans spread seeds. In the past, durian seeds were spread all over the place, but now it’s difficult [to find durian trees]. If the locals don’t deliberately plant durian trees, they won’t grow [on their own].”

Protecting the orangutans thus means protecting the forest and the villagers’ food security, Julius said.

Bullah, the farmer from Sitan-di, also said he’s aware of the role that the orangutans play in the forest ecosystem.

“After they eat [fruits], orangutans usually leave the seeds on the forest [floor], and these seeds will grow,” he said. “That’s why we can find durian trees deep in the forest there.” Julius said it’s important for locals to remember their ancestral wisdom in relation to the environment and the orangutans.

“There’s an unwritten local wisdom from our ancestors that teaches people to live in harmony with our surroundings and the environment,” he said. “The awareness of this wisdom should be raised among the young generation so that it doesn’t disappear.”

Bullah said that in the past, people here lived in harmony with the orangutans, viewing the apes as sacred animals that shouldn’t be hunted or killed. “There’s a belief that whoever hurt the orangutans could get misfortune,” he said.

But now, he said, he’s worried that as the orangutans increasingly seek out food like durian from villagers’ farms, people will become agitated. This could lead to them hunting down the apes, putting even greater pressure on a species already edging toward the brink of extinction. 🟩

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(Source: <https://www.eco-business.com/news/orangutan-sightings-rise-amid-habitat-loss-due-to-sumatra-dam-construction/>)



At a meeting of the UN Security Council earlier this month, UN Secretary-General Antonio Guterres said that climate change-induced sea-level rise is a direct threat to millions around the world and warned that the world could witness "a mass exodus of entire populations on a biblical scale". Image: guitarfish, CC BY-SA 3.0, via Flickr.

MALDIVES' MAN-MADE ISLANDS OFFER ANSWER TO SEA-LEVEL RISE

With climate-induced sea-level rise threatening the existence of island states, a new study says islands need to be raised by six metres or more to protect the Maldives.

Raising the heights of islands and building completely new ones are among solutions to climate change-related sea-level rise for the Maldives and other low-lying, small island developing states, scientists say in a new study.

According to the 6th Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), by mid-century one billion people will be exposed to much greater risks of flooding due to sea level rise and face storm surges, increased tidal flooding or even permanent submergence.

Maldives, picked for the study published February in *Environmental Research: Climate*, has already built the new island of Hulhumalé using sand dredged up from the sea and is planning to build new islands to accommodate the needs of rapid urbanisation and its tourism industry.

The South Asian island nation is considered particularly vulnerable since more than 80 per cent of its land, on 1,000 plus islands, is less than one metre above sea level. The researchers say that for long-term protection Maldives will need to raise the height of its islands to six metres or more above sea level.

“Of course, these islands would look very different to the beautiful ones with beaches we see in tourist brochures. They would be very urban with many high-rise buildings, as seen in [the capital] Malé today,” a press release from the University of East Anglia said. The building-new-islands-higher concept has implications for other low-lying island nations such as Kiribati, Tuvalu, and the Marshall Islands, the release added.

“What we are suggesting is scaling up existing activity, not doing something completely new,” says Robert Nicholls, director of the Tyndall Centre for Climate

Change Research at the University of East Anglia in the UK and one of the authors of the paper. “This approach shows there is another adaptation approach available.”

“Land reclamation following the approaches we suggest is widespread in the Maldives today and the new island of Hulhumalé, built next to the capital island of Male and linked by a new bridge, was raised about one metre above natural island elevation as an adaptation to marine hazards – sea-level rise and also tsunami.”

However, raising island heights or building new ones can be costly. Michael Oppenheimer, professor of Geosciences and International

Affairs at Princeton University believes the costs of creating artificial islands will probably be prohibitive and says there are “obvious, negative environmental impacts”.

Nicholls admits that there are costs to creating new islands and raising heights. “But, that is true for any adaptation intervention. So those conducting the adaptation need to assess the trade-offs,” he says. In terms of applying the approach, he says the main resource needed is sand, which is readily available in the Maldives. “The environmental implications would need to be assessed but these sand resources are already being exploited.”

He estimates that the sand costs US\$8 per cubic metre, which translates to about US\$8 million to raise a square kilometre of land by one metre. “These reclamations were funded by the Maldivian government and the sand was sourced and delivered via dredging,” he explained.

The approach suggested in the study, he says, would be most effective with the slowest sea-level rise associated with strong climate stabilisation.

According to Nicholls, raising islands makes the islanders safer from tsunamis as well as sea-level rise. “So this approach addresses both hazards to some degree.”

At a meeting of the UN Security Council earlier this month, UN Secretary-General Antonio Guterres said that climate change-induced sea-level rise is a direct threat to millions around the world and warned that the world could witness “a mass exodus of entire populations on a biblical scale”. 

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

(Source: <https://www.eco-business.com/news/maldives-man-made-islands-offer-answer-to-sea-level-rise-2/>)

“
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– ROBERT NICHOLLS

Director, Tyndall Centre for Climate
Change Research



Role and Relevance of the Youth in Policy-making and Governance: India, G-20 and Beyond

By Pooran Chandra Pandey

India's assumption of G-20 presidency for the on-going year is the one pivotal episode that offers myriad opportunities and variety of challenges in various sectors and focal areas across technology, economic transformation, climate change, supply chains, entrepreneurship and design driven solutions shaping the future of shared prosperity, both for the country itself, G-20 and beyond.

India being credited as a civilizational nation state, largest functional democracy, most populous nation with the largest youth population of over 600 million in the age groups of 18-35 years, out of which more than 450 million are enrolled across country's schools, colleges and institutions of higher learning, making it the largest place of millennial and Gen Z in the world.

Comparatively, this 450 million enrolment numbers in India equal to that of the EU population, offering size and scale to the possibilities that India has as youth dividend. These many numbers of the youth, in productive category, is by far the biggest and the largest anywhere in the world at a time when most nations, with exception of the African continent, have been facing the challenge of either a shrinking or aging population and in some cases even combination of the both.

While the debate on its youth population, trajectory of policies for their purposeful deployment continues, India has been pushing in finding solutions to complex issues of socio-economic and political nature through its youth power, their creativity and innovations across range of sectors and focussed areas through skilling, entrepreneurship, employment

guarantee schemes and support through education and innovations. National Education Policy 2020 in this direction further lays out the systematic vision and progressive mechanism to create a sustained and sustainable development model in India by 2040, coinciding with India's independence centenary.

Relevance of African continent in emergence of the future of a 'new world order' also assumes a vital significance as the continent has over 407 million youth population in the age groups of 25 and 49 years. If the numbers of the youth populations from India and Africa get added, they alone total up to more than a billion youth population, twice the size of the European Union. It's thus evident and even fair to state that inclusion of Africa into G20 mechanisms could be considered in collectively searching for solutions to humanity's most complex problems that could range from unleashing youth power for innovation, skills, social development, education, entrepreneurship, climate change, migration, poverty reduction, income inequality, among others. Pathway to solutions for shared prosperity is potentially going to significantly pass through India-Africa 'youth power and youth laboratory' corridors in large measures.

Amid on-going economic and geopolitical episodes and to keep the focus trained on supporting the youth and its work, Federal government and its central bank in India have been acting concertedly and in unison with their fiscal and monetary policies and economic tools to continue to provide solace on cost of living front for the youth population, among other beneficiaries. The country, due to its fiscal prudence

and better monetary policy management, is expected to grow at 7 per cent growth rate as per IMF forecast, among the fastest in the world.

Alongside, as the world continues to experience unpredictable socio-economic unpredictability's and cost of living challenges, riveted by bilateralism, India's focus on self-reliance, indigenous supply chains, country continues to push forward for resource optimization and revitalization of socio-economic resources, in the aftermath of the global pandemic.

India's push for entrepreneurship and self-reliance has shown green shoots reflected through success of national initiatives such as Make in India, Start-up India, Production Linked Incentive Scheme and Local for Global – leading to greater incentivisation offered to the industries, start-ups led by the youth, and communities resulting in large investments.

India today tops the entrepreneurial landscape with more than youth led 100 start ups in category of unicorns (valuation of USD 1 billion or more) against a total number of 1200, internationally.

In addition, India as the largest democracy has been an experiment ground for youth politics and change on the ground levelling up its diversity in schools, colleges and politics both in the federal parliament and state legislative assemblies in its constitutional make up of quasi-federal ingredient, holding the base and foundation of governance across judiciary, executive and legislative branches of the government, a potent lesson in how to keep democracy vibrant for international community.

The self-reliance pivot with entrepreneurship ecosystem has also led to country's diminishing dependence on fragile supply chains and unpredictable delivery systems, in lead up swelling international investments in defence, technology, health care, physical infrastructure, education, innovation and vaccines protocols, as key focus areas of the G-20 under India's presidency, where a large number of youth population is being driven in direction of focussed areas through 'policies by design' approaches and mechanisms.

While such trends continue to deepen and expand, results thereof continue to benefit country's youth population through a number of socio-fiscal incentives and revitalization of local economies while opening up opportunities for them at devolved levels. Such empowering outcomes are likely to further reduce


poverty, tapering off the gaps in income inequality, while triggering robust fiscal incentives for the youth population across rural and urban areas.

As country continues to ramp up its progress in terms of economic size at scale and impact, India would need to consider likely adverse impact of fast paced digitalization processes set in force not seen in decades since industrialization may likely adversely impact lives and livelihoods of the youth population. The nation would also need to consider taking adequate and cautionary measures to secure safety nets of the poor and the vulnerable youth population in pursuit of balancing out human welfare with economic growth.

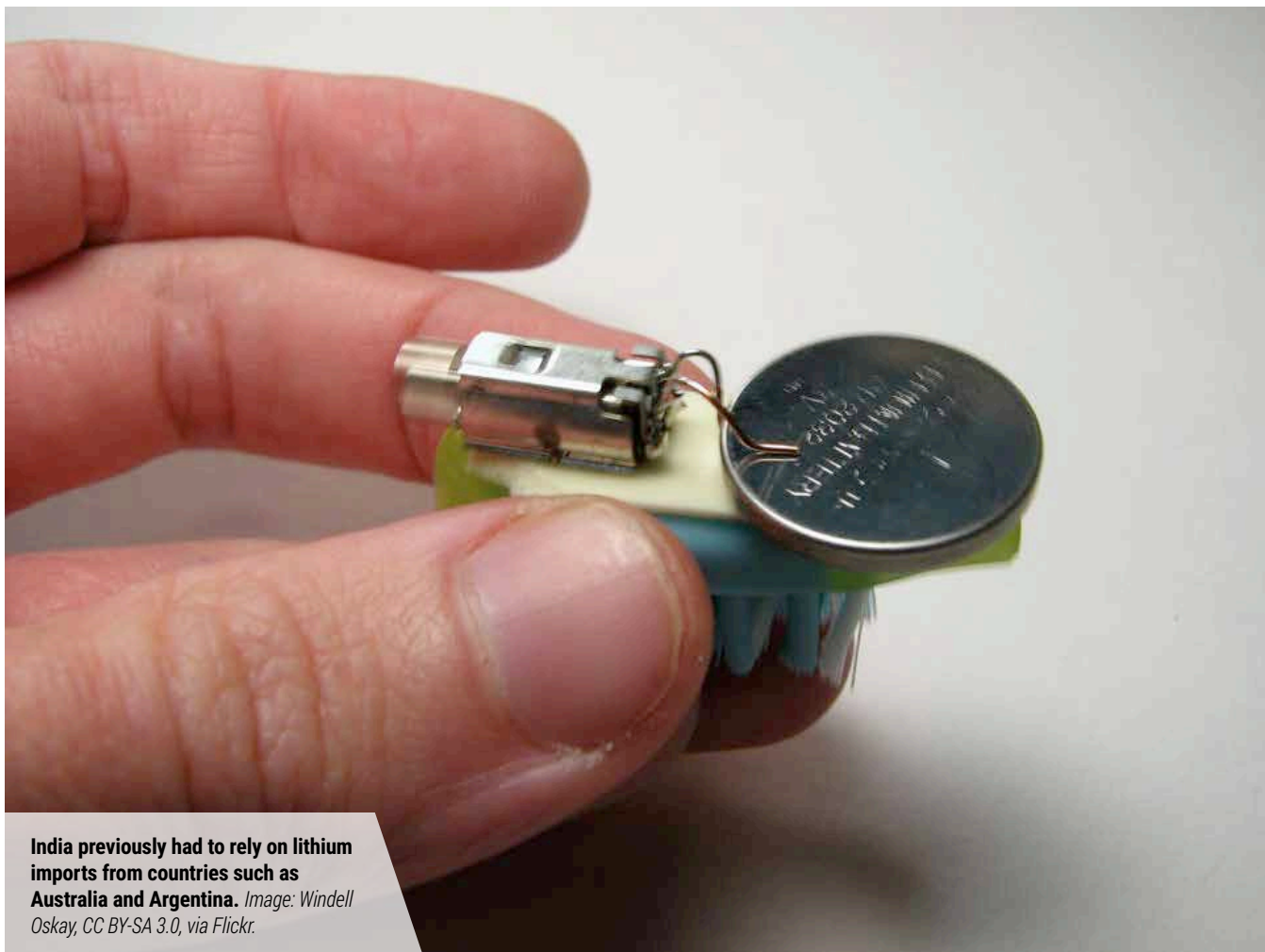
India's current approach to striking a tenuous balance between 'economic development and human welfare' amply triggers the goal of regional prosperity and international cooperation. This is also

reflective of essential ingredients of a replicable model to secure rapid economic growth with well-being of the diverse youth population amid techno economic disruptions reflected through fragile supply chains and uncertain labour market conditions, across the country, G20 territories and beyond. Such contexts also build a case for safeguarding the youth as an asset through time bound capability development and their welfare through innovative policy instruments.

As G20 is a premier grouping of both developed and developing economies accounting for over a three fourth of the world's gross domestic product and world trade, the role that the youth would decidedly play in further ramping up their contribution in creating a world shaped by shared prosperity at all levels – economic, political, legislative and beyond. A collective approach to partnership driven model involving the governments, industries and civil society actors with youth representation at the centre would need to be developed and deployed to better harness possibilities in shaping a sustainable, inclusive and growth oriented mechanism for a world shaped by shared prosperity and collective collaborations.

India's role as G20 presidency, as the largest democracy and its responsibility as the fastest growing economy is being keenly watched out by international community including its resolve and ability to shape a 'new socio-economic world order' based on the principles of 'One World, One Family', values and compassion. 

**India today
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India previously had to rely on lithium imports from countries such as Australia and Argentina. Image: Windell Oskay, CC BY-SA 3.0, via Flickr.

India's lithium discovery comes with environmental costs

Huge lithium deposits have been discovered in the Indian territory of Jammu and Kashmir, but extraction carries risks in environmentally fragile Himalayas.

The discovery of vast lithium deposits in the Indian territory of Jammu and Kashmir, hailed as a win for the country's clean energy transition, comes at a price for communities in the Himalayan region, say villagers and environmental scientists. Often called "white gold", the metal

is a key component in lithium-ion storage batteries, which are crucial for electric vehicles because they are weight-for-weight far more efficient than the commonly used lead-acid or nickel-metal hydride batteries.

The announcement in February of lithium deposits in the Reasi district of Jammu and Kashmir, estimated at 5.9 million tonnes, was

welcome in a country committed to transitioning away from fossil fuels. India previously had to rely on lithium imports from countries such as Australia and Argentina.

However, it comes amid reported subsidence of the Himalayan landscape triggered by the heavy machinery used to build dams and highways, raising concerns of further environmental damage.

“Use of heavy machinery for drilling and earth-cutting in the sensitive Himalayan region has been largely responsible for subsidence in Joshimath town,” says SP Sati, who teaches environmental science at the College of Forestry, Ranichauri in the adjacent Himalayan state of Uttarakhand where the subsidence has been devastating in recent months.

The residents of Reasi recognise the economic opportunities the lithium reserves can bring, but also the risks, as sinking houses force many to evacuate their homes to safer areas.

“When we first came to know about the discovery of huge lithium reserves just adjacent to our village, we were happy that it will bring us prosperity. But we now hear that when the extraction takes place, it can prove hazardous for us and our water and land,” says Balbir Singh of Salal village which sits on the lithium deposits.

“Even if we get some compensation for dislocation from our village, the thought of leaving the homes we have lived in for generations makes us very sad,” Singh says.

Mohinder Singh Sarpanch, head of the village of Salal, says the village should be compensated for the impacts of mining in their community. “So far, we have not been officially asked to vacate our village. If residents from the entire area are required to vacate, then over 500 families will get affected,” Sarpanch says. “It is not only about dislocation; there will be pollution which we will have to bear if we are relocated to a



Ensuring an environmentally friendly mining process is also essential to attract investment from large international companies given the growing global scrutiny of the battery value chain's environmental footprint.

—SIDDHARTH GOEL

Senior Policy Advisor, International Institute for Sustainable Development

nearby area. If we are asked to give these sacrifices for the country, the government has to think about us,” Sarpanch adds.

It is not clear when the Indian government is planning to start lithium extraction, but experts say it could be years before commercial mining operations begin.

“So far, only the primary resource calculation has been done. There are two more steps before we are sure about the exploitable resources and whether we will go for mining or not... it will take several years for the resources to be mined,” says Pankaj Srivastava, a professor who specialises in mineral exploration at the department of geology, University of Jammu. India would need to acquire specific technologies for mining and refining lithium, he added.

According to Siddharth Goel, a senior policy advisor at the International Institute for Sustainable Development with experience in the fields of environment, energy and

sustainable transport, lithium mine development can take 10 years or more. “However, it’s possible that India fast-tracks approvals and permits to reduce the time taken, given the critical importance of lithium in manufacturing electric vehicle batteries,” he says.

S S Verma, a professor at the department of physics at Sant Longowal Institute of Engineering and Technology, in Longowal, Punjab state, says that India has a long history of working mines and lithium mining is not difficult, “but refining is (evidently) difficult”.

Independent environmental impact assessments should be carried out before mining begins, given the sensitive ecology of the Himalayas, says Goel. “Ensuring an environmentally friendly mining process is also essential to attract investment from large international companies given the growing global scrutiny of the battery value chain’s environmental footprint,” he adds.

Shakil Romshoo, senior professor in Kashmir University’s department of earth sciences, says: “The discovery of lithium in the country is a big development as India aggressively pursues clean energy production. But considering the significant environmental impacts of lithium extraction, environment-friendly exploration technology will be needed whenever this resource is exploited.” Lithium mining has sparked protests around the world in recent years. According to a study published February in *Nature*, ecosystems in the vicinity of lithium deposits are “extremely fragile and linked in a food chain in which ecosystem services are crucial for livestock and rural populations”. □

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

(SOURCE: <https://www.eco-business.com/news/indias-lithium-discovery-comes-with-environmental-costs/>)



In the oceans alone, scientists suggest there are now about 170 trillion pieces of plastic — and there could be even more in the future as plastic production continues to proliferate. Image: Santanu Sen, CC BY-SA 3.0, via Flickr.

Lethal ‘plasticosis’ on the rise in bird species that ingest microplastics

Scientists have identified a new fibrotic disease called “plasticosis” in flesh-footed shearwaters, a species that inadvertently consumes plastic, writes **Elizabeth Claire Alberts**, Mongabay.com

When flesh-footed shearwater chicks hatch from their eggs, their parents start working to fill the chicks’ stomachs with as much food as possible. They do this for about 80 to 90 days, regurgitating squid and fish into their chicks’ mouths. If all goes to plan, the chicks will grow

into fledglings with feathers that will help them fly thousands of miles across the ocean. But as the world’s oceans have filled with microplastics — tiny plastic particles that shearwaters can easily mistake for food — fledglings are getting stuffed full of plastic instead of food. The outcome isn’t good, according to experts.

Scientists studying flesh-footed shearwaters (*Puffinus carneipes*)

have long known that plastic consumption can lead to problems like reduced body condition, organ damage, and ultimately an early death. Now, new research in the *Journal of Hazardous Materials* shows that consumed plastic can also lead to a newly identified disease: a plastic-related fibrosis aptly called “plasticosis.”

While this disease has thus far only been identified in flesh-footed shearwaters, experts say that nearly every organism — including humans — is being impacted by plastic in some way due to its proliferation in our environment and our ever-increasing exposure to it. One expert calls flesh-footed shearwaters the “canary in the coal mine,” forewarning us of what could happen to our own health if plastic production continues to accelerate as predicted.

‘All these pieces of plastic’

Plastic is everywhere. It’s in our clothing; it packages our food and drinks; it flakes off our car tires. Few plastic products can actually be recycled, and most of it ends up in our environment, either directly as microplastics, such as fibers shed from synthetic clothing, or as larger pieces that eventually break down into smaller pieces. This plastic pollutes the land, water and even the air, and ends up in our food, water, and ultimately our bodies. Many plastics contain toxic chemical additives, but plastic can also act as a sponge attracting other toxic substances, endangering any organism that consumes it.

In the oceans alone, scientists suggest there are now about 170 trillion pieces of plastic — and there could be even more in the future as plastic production continues to proliferate. It’s estimated that there are currently about 450 million metric tons of plastic produced each year, and production is projected to double by 2045. While previous research has looked at the impacts of plastic con-

sumption on wildlife in a lab setting, this new study claims to be the first to “document and quantify plastic-induced fibrosis in wild organisms.”

The research is based on a sample collection of 21 dead flesh-footed fledglings taken from Lord Howe Island, a small, sock-shaped island about 700 kilometers (430 miles) off the coast of Sydney, Australia. The remote island hosts a large breeding colony for the species. While some of the fledglings were found dead, others were humanely euthanised due to “extremely low body mass.” Most of these fledglings had plastic in their stomachs. On average, each bird contained about 30 pieces, but some held up to 200, the study found.

When the researchers analyzed the birds’ proventriculus, a part of the stomach responsible for digestion, they found that most of the birds had scar tissue indicative of plastic-related fibrosis, or plasticosis.

“All these pieces of plastic, they’re creating little injuries within the stomach,” Hayley Charlton-Howard, the lead author and researcher in Adrift Lab, tells Mongabay. “The stomach is trying to repair those injuries by layering it with a level of scar tissue to help it maintain structural integrity while it’s healing. But if the entire stomach is injured, then the entire stomach becomes really, really heavily scarred, and that’s called fibrosis.”

Once a seabird develops plasticosis, its ability to digest and process foods is reduced. The bird could also have trouble deriving nutrients from its food and be unable to fight off infection or parasites. It’s not currently known if shearwaters can survive for long periods of time with this condition.

The researchers also determined that it was plastic itself that was causing this issue, not other sharp objects like large squid beaks or pumice rocks that flesh-footed shearwaters normally eat. While the reasons for this impact needs

to be further investigated, Jack Rivers-Auty, study co-author and human biologist and immunologist at the University of Tasmania, says he believes that plastic triggers an inflammatory response due to its chemical composition.

Rivers-Auty says he was also “completely blown away” by how severe and extensive the fibrotic scarring was in response to the plastic and how quickly the scarring took over the stomach. “The scarring was everywhere,” he says.

The researchers say one point of concern is that plasticosis was even present in birds with only a small quantity of plastic in their stomachs.

“It could be that the birds were able to rid themselves of the plastic somehow, so we couldn’t count that, but we could still see the scarring,” Charlton-Howard says. “Or it may be that just one piece of sharp plastic just bouncing around in the stomach can cause that level [of damage]. We just don’t know.”

Therese Karlsson, the science and technical adviser at the International Pollutants Elimination Network (IPEN), who was not involved in the study, says the research is “very important” because it “gives a name to something that has been discussed within the scientific field for a long time.” “As the authors note, there has been a lot of previous studies indicating that this might be a possibility,” Karlsson tells Mongabay. “So although it is not surprising, it is concerning that we now know that it can happen in the field.”

‘Canary in the coal mine’

While flesh-footed shearwaters seem particularly susceptible to plasticosis due to the high amount of plastic they inadvertently consume, Rivers-Auty says other marine animals might face similar health issues due to plastic consumption — but that most of these conditions simply haven’t been documented yet. He also says it’s a “very big concern”

that flesh-footed shearwaters can apparently develop plasticosis after only consuming a relatively small amount of plastic.

“If we were to say how many seabirds out there had one or two bits and pieces in [their stomachs], it’s so many seabirds. It is a crazy number,” he says. But it’s not just seabirds. According to one study, about 1,200 marine species are being impacted by plastic. “I’m fairly confident there’s not an animal on Earth that hasn’t been exposed to microplastics in some way, which is terrifying,” Rivers-Auty says.

Humans also consume plastic. Scientists suggest that we ingest about 5 grams of microplastics each week through the food we eat, the water we drink, and the air we breathe. There’s also evidence of plastic particles present in human blood and placentas.

Rivers-Auty says he’s working on new research that suggests that human bodies would respond to plastic “very similarly” to the way flesh-footed shearwaters respond to plastic, which could result in a comparably dire outcome if humans are exposed to as much plastic as shearwaters. To this end, Rivers-Auty calls the flesh-footed shearwater “the canary in the coal mine,” especially as plastic production and pollution is expected to multiply in the future, further contaminating our already heavily polluted world.

“[Flesh-footed shearwaters] are unusually exposed to an incredibly high amount of plastic, but that helps warn us where everyone else is going to be,” he says. “I don’t know whether it’s 10 years or 500 years, but ... we are going to head in that direction to that similar level of microplastics.”

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(Source: <https://www.eco-business.com/news/lethal-plasticosis-on-the-rise-in-bird-species-that-ingest-microplastics/>)



Illegal logging on Pirititi indigenous amazon lands with a repository of round logs.
Image: Felipe Werneck/Ibama, CC BY 2.0

TROUBLE WITH CARBON MARKETS

A more radical level of accountability is needed for carbon markets. It is also time to establish minimum price floors, in order to crowd out poor-quality offsets and actors, especially for the Global South, says **Simon Zadek**.

In January, it was revealed that as much as 90 per cent of the carbon credits approved by one of the world's largest certifiers may be phantom, thus not representing actual reductions of carbon in the atmosphere. While the scandal may have shocked some, it should be no surprise. Today's voluntary carbon markets are not designed to be fit for purpose.

The logic behind carbon-offset markets is simple and compelling. If companies must pay for their carbon dioxide emissions, they will have a strong incentive to emit less, and more money will flow toward activities that avoid, reduce or remove emissions. But if such a huge share of certified offsets is of poor quality, the concept is clearly failing. Given the centrality of offsets to corporate net-zero pledges, this does not bode well for global climate action.

Making matters worse, poorly governed carbon-offset markets have enabled the rise of "carbon cowboys." These carbon-credit dealers underpay the businesses and communities in the Global South that provide nature-based offsets, which they then sell with a markup to developed country clients.

Many climate activists argue that any market-based approach is fundamentally flawed, enabling companies to remove carbon dioxide numbers from their balance sheets by purchasing offsets without actually reducing emissions. In this way, critics argue, companies avoid public and political pressure to transform their operations, and the pace of decarbonisation actually slows.

But the problem with the carbon-offset system is not that it is market-based. The problem is the absence of a robust governance framework to ensure that the market delivers on its public purpose. Even markets with contested reputations, such as those for finance and pharmaceuticals, have rules that go beyond certifying the quality of the products

traded, to ensure some accountability of market actors and, often, to set the prices that they can charge.

Voluntary carbon markets, by contrast, rely almost exclusively on private certification schemes supposedly affirming that a certain quantity of greenhouse gases – one ton of CO₂ equivalent per carbon credit – has been either kept out of the atmosphere or removed from it. Certification does have an important role to play, but it cannot work unless it is supported by a broader governance framework. Just as we would never leave, say, food or pharmaceuticals to be governed exclusively through voluntary, certifica-

Getting carbon and biodiversity credit markets right is a determining factor in achieving our climate, nature, and broader development goals. If we fail to do so, these goals may become unreachable.

tion-based systems, we should not do so for carbon emissions.

The good news is that efforts to strengthen governance of voluntary carbon markets are underway, both at the national level and through private international initiatives, such as the Integrity Council for the Voluntary Carbon Market. The Taskforce on Nature Markets, for its part, is advancing proposals for the robust governance of all nature markets, including carbon markets. But we must increase the pace, ambition, and impact of these efforts.


Building credible, effective carbon and biodiversity credit markets requires progress on multiple fronts. A more radical level of transparency and accountability is needed so that everyone can see exactly what deals are being made and by whom.

Traders need to be accredited, not least to end the carbon-cowboy phenomenon. Affected voices must be heard, and interested stakeholders must be visible. This will provide important quality signals to the market, reducing the desirability and valuation of poor-quality offsets and flawed certification, while protecting human rights.

It is also time to establish minimum price floors, in order to crowd out poor-quality offsets and actors, and to advance more equitable outcomes, especially for the Global South, indigenous peoples, and local communities.

Finally, international governance arrangements must be upgraded. Principles and guidelines are not enough to ensure the exclusion of poor-quality products, inequitable deals, rogue traders, and, more broadly, markets that do not comply with minimum agreed standards.

In all of these areas, devising promising solutions, implementing pilot programs, and scaling successful initiatives would be relatively straightforward. Such efforts should draw on existing platforms and initiatives that bring together market actors, civil society, representatives of indigenous peoples and local communities, experts, and policymakers. Digital tools like so-called smart contracts can accelerate progress, especially when it comes to boosting transparency and accountability.

Getting carbon and biodiversity credit markets right is a determining factor in achieving our climate, nature, and broader development goals. If we fail to do so, these goals may become unreachable. In fact, without a comprehensive makeover, these markets will more likely be part of the problem. 

Simon Zadek is Executive Director of Nature-Finance.

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(Source: <https://www.eco-business.com/opinion/trouble-with-carbon-markets/>)



In October 2022, tractor convoys were driven through main city centres in protest against the New Zealand government's livestock emissions plan. Image: Groundswell NZ / Facebook

THE FOOD SYSTEM REVOLUTION IS COMING

Last year's farmer protests in New Zealand, for example, showed how abruptly climate policies can be disrupted when workers and communities feel left out. Policymakers and corporate leaders need to get in front of the issue now, says

Robin Willoughby and Nico Muzi

Disruption is coming to the agriculture sector. Around the world, livestock farmers are leaving the land, policymakers are targeting the harmful environmental and social effects of industrial meat production, and consumers are shifting away from meat to embrace healthier, more sustainable alternatives. With the sector approaching a crossroads, decision-makers in government, industry and civil society will need to heed the lessons from major transitions in other industries and start preparing for them.

The preparation will require a careful inventory of farmers, workers and consumers' needs. While farmers are growing older and leaving the land for other pursuits or retirement, the agriculture sector is struggling to attract new entrants – and not just in richer industrialised countries. For every farm manager under 40, there are three over the age of 65 in Europe; and from Sub-Saharan Africa to Asia, Latin America, and the Caribbean, the number of older people living in rural areas is increasing while the number of young people declines.

At the same time, farms are becoming larger, and small farm operations are being squeezed. Owing to the challenging economics of farming and the power of a small number of giant industry incumbents, farms are being consolidated in the name of efficiency and economies of scale. As a result, the European Union lost more than one-third of its farms, and 40 per cent of its livestock farms from 2005 to 2020. Policymakers are thus left to consider whether and how to protect family farms, and how to avoid the risks of animal welfare violations, poor working conditions, and diseases that are inherent in industrial livestock farming.

Policymakers are also waking up to the compelling body of evidence

about industrial meat production's environmental harms. While agriculture accounts for nearly one-third of all greenhouse gas emissions, livestock alone (particularly cattle) contribute nearly 15 per cent. Moreover, animal agriculture is the main cause of deforestation and biodiversity loss. Forests are razed to free up land not just for animal grazing but also for the additional crops needed to feed those animals. Beef production alone takes up some 60 per cent of land used for agriculture, even though it contributes less than 2 per cent of total calories consumed globally.

In Spain, factory-farm pollution has become so pervasive that pig manure has contaminated nearly one-quarter of all ground and surface water in the country. No wonder regulators are urgently seeking ways to target livestock pollution and produce more on less land. Given the increasing risk that infectious diseases will spread from animals to humans (zoonoses) through industrial livestock farming, the impetus for tighter regulation will only grow.

While livestock and agriculture have traditionally been excluded from most emissions reduction schemes, policymakers in Denmark, the Netherlands, and New Zealand are already working to close this gap, and many other countries will soon follow suit. The question now is not whether there will be increased regulation of the livestock industry, but what shape and form it will take. Farmers and companies alike should be prepared to adapt to changes that are now inevitable.

Finally, consumers, too, are shifting away from meat and dairy. Over the past decade, the average person's meat consumption has decreased by almost 17 per cent in the United Kingdom and by 11 per cent in Germany. Notwithstanding a recent slowdown, there is still growth in the uptake of alternative proteins – a food source that produces only a tiny fraction of the

negative environmental and animal-welfare effects of traditional meat products. Plant-based meat and milk sales are already trending up across the board in the EU, but also in countries like Thailand and South Africa. When these products reach taste and price parity with meat, their uptake by consumers could accelerate very quickly indeed.

Public policy also has a role to play. Livestock farming tends to be heavily subsidised in many countries, owing to the sector's low margins and high levels of debt. As sales fall, declining revenue is likely to have significant welfare implications for farmers and other workers tied to the industrial meat production systems.

Given the complexities of these interacting trends, policymakers and corporate leaders need to start getting in front of this issue now. The experience of other sectors that have begun decarbonizing – not least energy – shows that a planned and guided transition is always better than an ad hoc, unmanaged process.

One need look no further than last year's farmer protests in the Netherlands or New Zealand to see how abruptly climate policies can be disrupted when workers and communities feel left out. Unfortunately, we still have only a limited understanding of how best to integrate policy and corporate action to reduce food system emissions while also protecting livelihoods. Since resisting change is not an option, policymakers and corporate leaders would do well to start thinking about how they will manage it in the coming years. 🌱

Robin Willoughby and Nico Muzi are managing directors of Madre Brava, an organisation that advocates for companies, governments and financiers to provide affordable and sustainable food for all.

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(Source: <https://www.eco-business.com/opinion/the-food-system-revolution-is-coming/>)

Indigenous, conservation groups pen guide on tropical forest carbon credits

An updated guide written by eight conservation and Indigenous organisations offers a detailed path forward for companies that want to compensate for their carbon emissions in addition to decarbonising their supply chains, writes **John Cannon**, Mongabay.com



The updated Tropical Forest Credit Integrity guide calls for due diligence on the part of companies to ensure the credits they purchase will result in climate gains. Image: Dennis Jarvis, CC BY-SA 3.0, via Flickr.

Eight conservation and Indigenous organisations have released a detailed guide for companies looking to invest in tropical forest carbon credits.

The groups first published the Tropical Forest Credit Integrity (TCFI) Guide in May 2022. After months of consultation, an update lays out step-by-step guidance that they say provides companies with a tool to offset their carbon emissions in conjunction with the “decarbonisation” of their operations.

It was made public at a Feb. 9 meeting in Mexico of the Governors’ Climate and Forests Task Force, an international group of leaders formed in response to deforestation,

climate change and other environmental issues.

“For years, companies have been raising their ambitions for a net zero, nature-positive future, but now is the time to turn those commitments into action. This updated TFCI Guide provides the direction companies need to do just that,” Emily Nyrop, vice president for climate change at Conservation International, said in a statement. “It points companies toward high-integrity carbon credits and helps ensure that corporate use of those carbon credits aligns with real, measurable progress and impact for both the climate and communities.”

Indigenous Organisations of the Amazon River Basin (COICA), the Environmental Defense Fund,

the Amazon Environmental Research Institute (IPAM), the Nature Conservancy, the Wildlife Conservation Society, the World Resources Institute and WWF.

Interest in the voluntary carbon credit market, which, in principle, provides individuals and companies with the opportunity to offset their emissions by investing in climate change mitigation projects, has surged in recent years, driving the value to more than US\$2 billion in 2021. Scientists and conservationists often consider credits aimed at halting tropical deforestation among the most valuable.

That’s due not only to the enormous amount of climate-warming carbon that avoiding deforestation can lock away and

out of the atmosphere, but also to the wildlife habitat, community livelihoods and ecosystem services such as water regulation that tropical forests provide.

But critics contend that allowing companies to buy credits — instead of forcing them immediately to reduce the amount of carbon they emit — will not help address climate change. Still other criticism centers on a practice that appears to be outsourcing climate change mitigation, mostly from industrialised countries that pollute the most, to less-industrialised nations that bear less responsibility for the current climate situation.

What's more, questions have arisen about how effectively credits are at actually preventing trees from being cut down, keeping carbon out of the atmosphere, and maintaining a viable path to capping global temperatures at below 1.5° Celsius (2.7° Fahrenheit) over the pre-industrial average, a principle many countries agreed to in the 2015 Paris climate accords. A recent investigation by The Guardian newspaper in the UK and Die Zeit in Germany concluded that more than 90 per cent of the carbon credits they examined were essentially “worthless” when it came to their impact on the climate.

Indeed, such concerns may discourage a fuller corporate embrace of carbon markets. In a 2022 survey conducted by Conservation International and a partnership of climate-focused NGOs called the We Mean Business Coalition, sustainability managers at many companies with a strong interest in voluntary carbon markets said they were hesitant to engage in these markets. They cited concerns about the quality of credits available. And some said they worried that purchasing credits might open their companies up to the criticism that they were trying to “greenwash” their image.

The authors say this updated TFCI guide helps corporations surmount those hurdles. “Our new roadmap now provides detailed, practical guidance for companies to implement these principles, so buyers know their purchases are sound,” Mark Morge, vice president of natural climate solutions at Environmental Defense Fund, said in the statement. “With our guidance, companies can have high confidence that their financing contributions will help mitigate climate change by halting tropical deforestation.”

The TFCI guide advocates a process for companies' carbon credit purchases that begins with a plan for a portfolio including “high-quality” credits that go beyond individual projects and reflect a “jurisdiction-scale” strategy, which experts say is vital to meaningfully tackling rising temperatures. That means seeking out credits sold at state, provincial or federal levels.

The guide also says that companies must carry out further due diligence on credits to be purchased as an additional verification for quality.

Still, proponents of the carbon credit market as a means to address climate change say it is only “a tool” that must be wielded correctly to make a difference.

“No particular policy instrument stands out as a ‘silver bullet,’ but improving the coherence and complementarity of the policy mix across government levels can enhance the effectiveness of policies — both individually and in combination,” wrote researchers Robert Nasi and Pham Thu Thuy of the Center for International Forestry Research and World Agroforestry (CIFOR-ICRAF) in a Feb. 7 commentary for Mongabay.


Nasi is CIFOR-ICRAF's CEO, and Pham Thu Thuy is a senior scientist with the Indonesia- and Kenya-based research organisation.

They note that effective carbon offset projects must accurately account for the emissions reductions it claims and that those reductions offer some improvement over what would have happened had the project's work not taken place — what scientists call “additionality.”

The TFCI guide also stresses that such projects must be carried out in consultation with Indigenous peoples and local communities.

“The full and effective participation and the recognition of rights of Indigenous Peoples and Local Communities (IPLCs) during all processes is vital for the conservation of forests and the mitigation of climate change,” Harol Rincón Ipuchima, COICA's coordinator of climate change and biodiversity, said in the statement. “The TFCI Guide recognises IPLCs as partners and rightsholders, not only beneficiaries throughout the process mainly seeking a fair and equitable distribution of benefits.” Companies that invest in carbon credits must also work in tandem to reduce their emissions, the guide's authors say.

“Leadership starts at home, focusing first on a company's footprint and deep decarbonisation in line with a science-based target, augmented by high-integrity, high-impact investments in nature-based solutions,” Fran Raymond Price, lead for global forest practice with WWF, said in the statement.

“The carbon market must continue to improve and develop. And although it is not a stand-alone solution, if used appropriately, the market can increase support for transformative interventions at scale — as the TFCI Guide suggests — to deliver tangible benefits for people, nature and climate.” 

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(Source: <https://www.eco-business.com/news/indigenous-conservation-groups-pen-guide-on-tropical-forest-carbon-credits/>)



An activist calling for climate finance at the COP27 summit in Egypt in November 2022.

Image: Eco-Business/ Liang Lei.

Three months late, Asian developing states settle on loss and damage council reps

“Very strong views” meant the standoff was resolved less than two weeks before a global meeting to flesh out details for the climate fund. South Korea and Saudi Arabia are among wealthy nations sharing APAC’s “developing country” seats, writes **Liang Lei**

Six Asian nations – China, India, Pakistan, Philippines, Saudi Arabia and South Korea – will share two seats on a global panel tasked to write rules for a fund for helping vulnerable countries recover from climate disasters.

The decision ends a months-long standoff among developing Asia Pacific countries over who should

represent the region, at the forefront of climate risks, on the committee. It was made public in an update on a United Nations website on Thursday (16 March).

Countries globally had agreed to set up a “loss and damage” fund at last year’s COP27 climate conference in Egypt, for developing countries to get money from richer states, which have emitted more Earth-heating

gases historically, to recover from climate-related calamities such as droughts and hurricanes.

A “Transitional Committee” was set up at COP27 and tasked to operationalise the funding arrangements, with a deadline for COP28 at the end of this year. Twenty-four seats were allocated based on region and development status, with developing Asia Pacific states getting two places. A third is already reserved for COP28 host United Arab Emirates.

The Asian seating arrangement appears to be the best way to get as many nations involved as possible, across the three meetings that the committee is expected to hold. Officials from China and India will attend the first session in less than two weeks’ time. Representatives from the Philippines and South Korea will attend the next one; Pakistan and Saudi Arabia personnel the following session.

None of the other seats were split three-ways. Some are shared between two countries – such as between Brazil and Dominican republic in the Latin American region, and Denmark and Netherlands for a developed country spot.

The nominations were supposed to be in by December 2022, though few countries globally met the deadline. The last two Asia Pacific places took weeks more to settle after the rest had been filled up.

In a press briefing earlier this month, Mohamed Nasr, lead climate negotiator for Egypt, the host of last year’s COP27 summit, had said that the holdup was because some parties had “very strong views” they wanted to bring to the table.

“This shows that everybody really wants to discuss loss and damage and they are committed. But the other side to that is...the process getting delayed,” Nasr said.

Hafiz Jawad Sohail, a climate activist from Pakistan, said the country “is at the forefront of vulnerability [caused] by the global

climate crisis, and can realistically present the position of vulnerable countries” regarding loss and damage funding. Pakistan experienced severe back-to-back heat-waves and record floods last summer that killed thousands.

He noted that Pakistan last year had also chaired the G77+China bloc of developing countries, which was one of the key players in negotiating the loss and damage deal at COP27.

Sohail said there should also have been a greater focus on vulnerability rather than geographical spread. That means countries like Afghanistan and Bangladesh in Asia, along with Burundi and Somalia in Africa, and Caribbean nation Haiti, should have been part of the committee, he added.

Ines Benomar, a researcher at United Kingdom-based think tank E3G, said the Asia Pacific seats are more politically representative of the Asian region rather than the Pacific. Benomar said it was good that Pakistan is represented, but “discouraging” that more small island developing states are not.

“Many of the [small island developing states] of the region have been at the forefront of the loss and damage discussion, trying to bring attention to the issue and push the agenda forward since its early days. This seems again like a missed opportunity to put vulnerable voices at the centre of the conversation,” she said.

Four such small island countries are in the Transitional Committee. Two reserved seats went to Asia’s Maldives, and Caribbean nation Antigua and Barbuda. Neighbour Barbados has a Latin America seat. Timor-Leste, in Southeast Asia, has a place under the “least developed countries” category.

Wealthy developing countries

Saudi Arabia and South Korea stand out among the latest six APAC mem-

Who’s writing the loss and damage funding rules?

African developing countries

- Egypt (COP27 host)
- South Africa
- Sudan

Asia Pacific developing countries

- United Arab Emirates (COP28 host)
- India, the Philippines & Saudi Arabia (sharing seats)
- China, South Korea & Pakistan (sharing seats)

Latin America, Caribbean developing countries

- Chile & Colombia (sharing seats)
- Dominican Republic & Brazil (sharing seats)
- Venezuela & Barbados (sharing seats)

Small island developing states

- Antigua and Barbuda
- The Maldives

Least developed countries

- Timor-Leste
- Bhutan

Other developing countries

- Armenia

Developed countries

- Norway
- United States of America
- France
- Australia
- Finland
- Canada
- Denmark & Netherlands (sharing seats)
- United Kingdom
- Ireland & Germany (sharing seats)
- Japan

bers of the Transitional Committee for their relative wealth, although they are still classified as developing countries in international climate fora. So is COP28 host United Arab Emirates, which also occupies a developing country spot.

At COP27, there were divergent views on whether such countries should be payers or eligible recipients for loss and damage funds. A consensus was not reached.


Benomar said the issue presents a “real risk of conflict of interest”, since high-emitting fossil fuel producers and wealthy countries are involved. It could result in a “very tricky discussion regarding where the finance comes from”, she said.

Nasr said the focus of the committee discussions should focus on funding arrangements that work and can get money to vulnerable communities quickly. “Should they wait until we fix this discussion on who to pay, or should we respond to them as soon as possible...this is the way we see it. We should respond as soon as possible,” he said.

Sohail said the developing country seats should have been allocated to “deserving parties”, and that Saudi Arabia and South Korea could have been shifted to the developed nations list. Both countries rely heavily on fossil fuels for income and energy.

The Transitional Committee provided for 10 seats for developed countries, which are generally expected to be required to pay into the loss and damage fund. Japan and Australia feature as APAC members of that category.

Benomar noted that Australia’s inclusion could allow it to represent the needs of the region, which includes many Pacific island states.

The Transitional Committee is due to meet for three days in Egypt at the end of March. The committee needs to show how it plans to establish the fund and identify where the money will come from then, without getting stuck in bureaucracy, Benomar said. 

(Source: <https://www.eco-business.com/news/three-months-late-asian-developing-states-settle-on-loss-and-damage-council-reps/>)



Degraded forests are those that have suffered any human-induced disturbance that has led to a partial loss of their tree cover or function. Secondary forests are those that are regrowing naturally in deforested areas.

Image: Nature.Catcher, CC BY-SA 3.0, viaFlickr.

Regrowth of degraded tropical forests offsets 'a quarter' of deforestation emissions

Recovering forests can offset around a quarter of the emissions generated from deforestation in humid tropical regions, according to a new study, writes **Yanine Quiroz**

Such forests – also known as degraded and secondary forests – have had some degree of disturbance by human activities, such as deforestation or fires.

They currently cover about 10 per cent of the tropical forest area worldwide and are concentrated

in the Amazon, Borneo and central Africa. The new research, published in *Nature*, uses satellite data to assess how much carbon these forests accumulate in their above-ground vegetation and estimates their potential to store carbon in the future. The researchers find that degraded and secondary forests in

humid tropical regions have stored, on average, 107m tonnes of carbon (MtC) annually between 1984 and 2018 – enough to offset 26 per cent of the carbon emissions generated from forest loss in those regions during that period.

Moreover, the research estimates that conserving such forests could lead to an annual carbon sink of 53MtC.

The study says that investing in conservation for secondary and degraded forests is essential, but warns that this should not come at the expense of conserving old-

growth forests, which “remains the most cost-effective climate mitigation strategy in the land-use sector”.

Recovering forests

Researchers use the term “recovering forests” to collectively refer to degraded and secondary forests.

Degraded forests are those that have suffered any human-induced disturbance that has led to a partial loss of their tree cover or function. Secondary forests are those that are regrowing naturally in deforested areas. These forests are primarily located in the Amazon, Borneo and central Africa – three regions that together accounted for 29 per cent of global emissions from forest loss during 2001-19. But these regions are not just significant for their forest loss, says Dr Viola Heinrich, the lead author of the study and a research associate at the University of Exeter. She tells Carbon Brief:

“Recovering forests are important for conservation and restoring the carbon stored within them. The research has shown that they also have other co-benefits or ecosystem services that they can continue to provide if you let them recover.”

For example, the study says, in Malaysian Borneo, degraded forests have been found to “provide access to clean water, clean air and regulate temperature”, while “older secondary forests can increase biodiversity in both species richness and diversity”. However, recovering forests are also impacted by logging, fires and climate change.

Monitoring of those forests is crucial for financing schemes, such as the Reducing Emissions from Deforestation and Forest Degradation (REDD+) framework. It is also a key part of the Global Stocktake, a global review of international progress towards fulfilling the Paris Agreement goals. In order to be effective, the stocktake requires accurate reporting of all carbon sources and sinks.



Recovering forests are important for conservation and restoring the carbon stored within them. The research has shown that they also have other co-benefits or ecosystem services that they can continue to provide if you let them recover.

—DR VIOLA HEINRICH
Research Associate, University
of Exeter

The study uses satellite images to quantify the growth of recovering forests across three vast regions: the Amazon, Borneo and central Africa. Heinrich explains that this method yields a better understanding of the forests’ spatial patterns and changes over time than previous studies, which have generally focused on data collected in the field.

Dr Ricardo Dalagnol, co-author of the study and postdoctoral researcher at the University of California, Los Angeles, says that this is the “first time” that researchers have taken such a large-scale look at recovering forests. He tells Carbon Brief:

“We show that [both forests] may be still growing, and we can quantify how much they can contribute in terms of carbon [sink].”

Carbon sinks

The researchers combine two satellite datasets. The tropical moist forests dataset tracks forest degra-

dation considering changes in land use, such as deforestation, logging or other disturbances; they use this to map degradation from 1984 to 2018.

Then, using a dataset of above-ground biomass from 2018 – which takes into account trees, leaves, grass and all other vegetation that grows above the soil of tropical forests – they determine how much carbon is sequestered across the humid tropical forests.

They also apply growth models to determine how these forests might sequester carbon in the future. They estimate the carbon stock of recovering forests in 2018 and model their potential carbon stock by 2030, if forests remain conserved.

Dalagnol says this modelling is “one of the innovations” of their approach, allowing them to “create the trajectory of recovery” for the forests.

The study finds that degraded and secondary forests in the Amazon, Borneo and central Africa stored 107MtC annually across the analysis period, counterbalancing 26 per cent of carbon emissions from tropical forest degradation during that time.

The charts below show the accumulation of aboveground carbon in degraded forests and secondary forests following disturbances in the Amazon (light blue), Borneo (green) and central Africa (grey). The map illustrates the three regions focused on in the study and their breakdown into old-growth (dark green), degraded (medium green) and secondary forests (light green).

Heinrich and her team calculate that there are 60m hectares of recovering secondary and degraded forests across the three regions – about 1.5 per cent of the world’s forested area. But she points out that they play an outsized role in carbon sequestration, absorbing 5 per cent of all carbon absorbed by forests.

The study also looks at regrowth rates in the three regions. These rates can vary due to climate

variables, such as temperature or water availability. They find that in Borneo, regrowth rates were 45 per cent and 58 per cent higher than in central Africa and the Amazon, respectively.

Heinrich points out that these high rates of recovery in Borneo make sense because the island is “very equatorial and generally has more rainfall than the other broader regions”.

A possible limitation of the study is the exclusion of other tropical areas such as Central America, western Africa and south-east Asia. However, that would have added more complexity to an already difficult analytical process, says Dr Emilio Vilanova, a Venezuelan environmental and forest sciences researcher who is part of the Amazon Forest Inventory Network (RAINFOR).

Although other studies have analysed the carbon dynamics in recov-

ering forests, most of them have been conducted at a small scale, says Vilanova, who was not involved in the study. Even when this type of research is carried out at a larger scale, it generally has limited coverage, making it difficult to build global predictive maps, he adds:

“The combination of [methods] indeed puts this study in a unique and innovative position to be a key resource regarding data on the carbon sink of recovering tropical forests.”

Conserving degraded forests

Modelling the carbon stock of recovering forests by 2030, the study finds that conserving such forests has a carbon sink potential of 53MtC annually across the tropical regions analysed. However, this projection does not necessarily account for what will happen in the future if the planet continues to experience more extreme weather and climate condi-

tions, warns Heinrich. For example, fires significantly reduce the ability of forests to recover.

“This is a big issue in the Amazon, where very large fires affect the forest. They lose carbon and the ability to recover it,” says Dalagnol.

Water deficiency, a drought indicator, also affects the carbon recovery of forests, Heinrich tells Carbon Brief:


“That was evident across the regions, especially in the Amazon and in Borneo, which we found surprising because there is a much less extreme water deficit or drought [there] compared to the Amazon.”

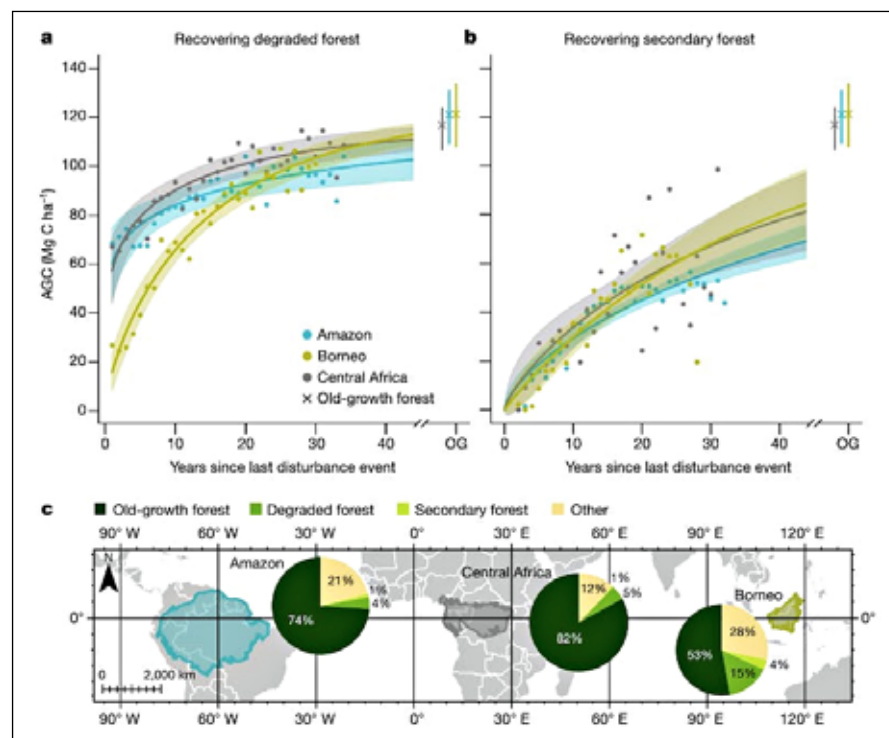
The study stresses the relevance of investing in conservation of recovering forests as they are a “sizeable carbon sink”, despite their slow rates of recovery.

The results also show the importance of preserving old-growth forests, says Dalagnol, as recovering forests will not help slow climate change alone.

No official global mechanism specifically addresses the state of recovering forests. However, Vilanova points out the importance of forest degradation in the international agenda:

“Forest degradation is one of the key elements of the REDD+ strategies that have been put in place to protect tropical forests...Although there are many successful experiences where tropical forests at risk of deforestation have been protected, these mechanisms have had limited effect on the ground”.

Heinrich hopes that the new insights on degraded forests provided by the study can “hopefully...[be] the first stepping stone to conserving them as well”. 



Accumulation of aboveground carbon as a function of time since last disturbance in degraded forests (top left) and secondary forests (top right) for three different regions: the Amazon (light blue), Borneo (green) and central Africa (grey). The map (bottom) shows the spatial extent of each region. The three pie charts show the percentage of each region occupied by different forest types: old-growth forest (dark green), degraded forest (medium green), secondary forest (light green) and other (yellow). Source: Heinrich et al. (2023).

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SOURCE: <https://www.eco-business.com/news/regrowth-of-degraded-tropical-forests-offsets-a-quarter-of-deforestation-emissions/>

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