October 2025

# NEWSLETTER

THE LATEST NEWS AND UPDATES FROM MEER

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## *A Warm Greeting from MEER*

In this October edition, we bring you fresh insights from across our global initiatives. You'll hear directly from Dr. Ye Tao, sharing reflections from his recent meetings in The Gambia, where discussions focused on education, community partnerships, and advancing climate adaptation strategies. We also take you inside our ongoing projects in Africa and India, where MEER's cooling and resilience technologies are being developed and tested to meet the urgent challenges of a warming world.

Each update showcases the progress, collaboration, and innovation that drive our mission to create sustainable, scalable solutions. Thank you for continuing to walk alongside us on this journey—and for supporting work that is making a real difference for people and the planet.

# Transforming Waste into Opportunity: My Journey with MEER's PET Bottle & Bamboo Training Initiative

**By Emmanuel Saati, MEER Africa Intern**

When I first joined MEER as an intern, I knew we were tackling climate change and sustainability in bold ways, but I didn't expect how personal the journey would feel. Over the past six months, I've had the privilege of watching – and taking part in – something that is more than just a project. Our PET Bottle & Bamboo Training Initiative has shown me that waste can truly become wealth, and that communities like ours can rise by re-imagining the everyday materials around us.

## *Seeing Waste Differently*

Growing up, I was used to seeing PET bottles scattered everywhere – in rivers, on roadsides, in trash heaps. They were a symbol of pollution, of problems nobody wanted to solve. But through this initiative, I've seen them transformed into construction materials that are strong, durable, and even beautiful.
At the same time, bamboo – a material I had often thought of as ordinary – has proven to be extraordinary. It is strong, renewable, and deeply rooted in our traditions. Combining bamboo with recycled PET bottles created an unexpected partnership: nature and waste joining forces to build something new.

## *Learning by Doing*

The training was hands-on from the start. I saw participants go from nervous beginners to confident artisans. They learned how to:

**Collect, clean, and process PET bottles** so they could be reused safely.

**Select and treat bamboo** to make it strong and long-lasting.

**Design and prototype furniture** that people actually want in their homes.

**Build and finish products** that are not just sturdy but attractive.

What impressed me most was the discipline in quality and safety. Every piece was tested, every step mattered. This wasn't about making cheap things – it was about creating products that people would be proud to buy and use.

## *The Human Impact*

For me, the greatest transformation wasn't just in the materials – it was in the people. I watched friends and colleagues light up as they discovered new skills. They started with little experience but graduated as artisans with marketable knowledge.

They built chairs, tables, shelves, and storage units out of PET and bamboo.

They spoke with confidence about their future, no longer just looking for jobs but dreaming of starting their own small businesses.

They showed pride not only in what they made but also in how they could contribute to reducing waste in their communities.

As one trainee told me, "I used to walk past plastic bottles and see garbage. Now I see opportunity." That stayed with me.

## *A Ripple Effect*

This initiative has two powerful impacts that I cannot ignore:
Environmental: Each PET bottle reused is one less choking our waterways. Each piece of bamboo used responsibly is a reminder that sustainable resources can replace unsustainable ones.

Social: Skills bring dignity. Confidence brings hope. Together, they create livelihoods that can lift families out of economic hardship.

The spirit of entrepreneurship sparked by this training is real. I believe many of the graduates will build businesses that outlast this program – and that is the true measure of success.

## *Looking Ahead*

As I reflect on this chapter, I see MEER's PET Bottle & Bamboo Training Initiative as a living model of sustainable development. It shows how communities can fight pollution, embrace innovation, and build livelihoods all at once.
For me personally, it has reinforced why I chose to be part of MEER: because we don't just talk about solutions – we build them. And we do it in a way that empowers people, respects the environment, and leaves lasting change.
I am proud to have witnessed this journey. And I am even more excited to see what these newly skilled artisans will create next.

# NEWS FROM INDIA

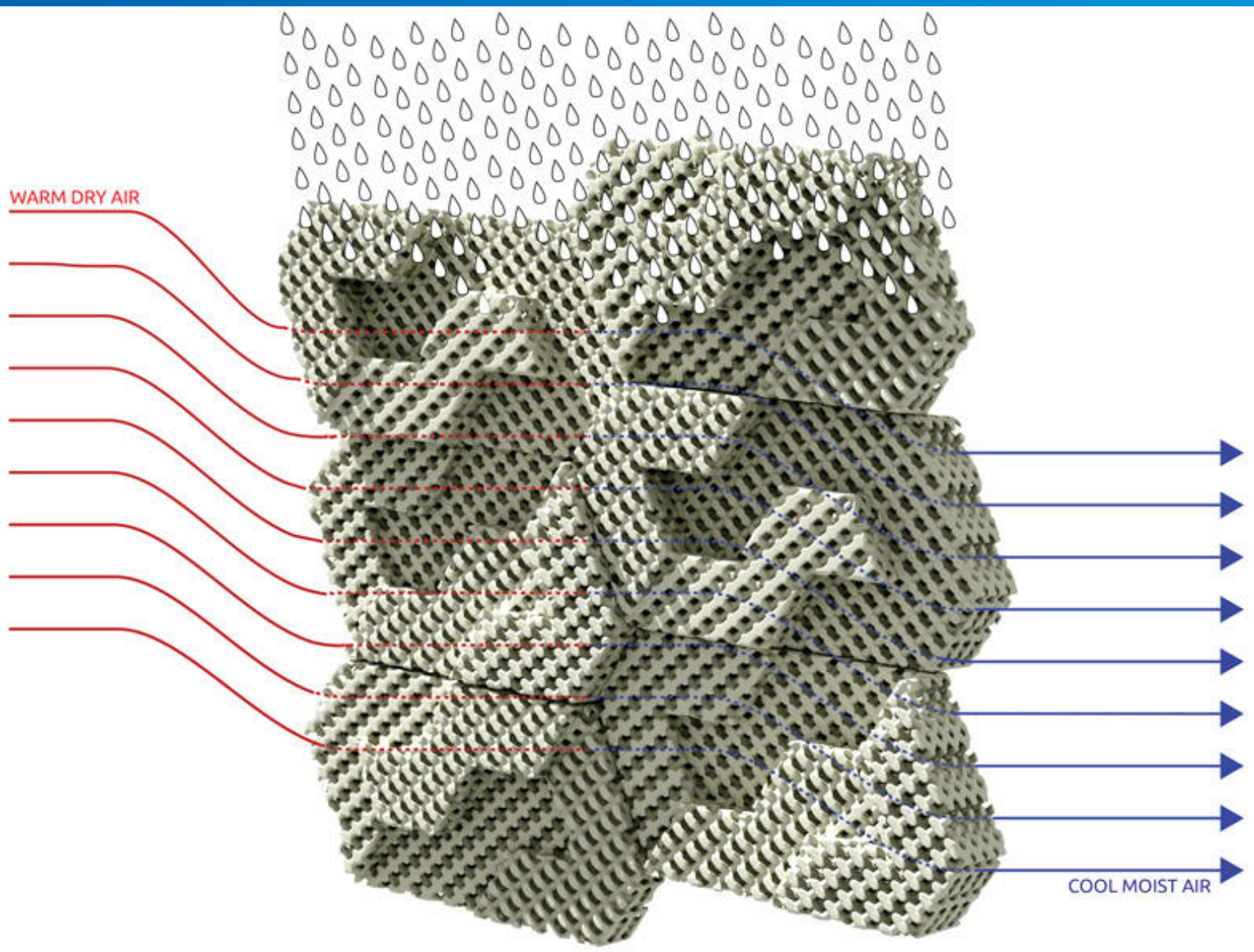
## Welcoming Paulami Shukla to the Team

This month, MEER India welcomed Paulami Shukla as our newest intern, joining project officers Samiksha and Bunny in Pune. Paulami has already been out in the field, visiting rooftop cooling prototypes across the city and learning how MEER's reflective materials are being tested in dense, urban environments. These trials are designed to measure how high-albedo PET–aluminum films can reduce indoor temperatures, ease heat stress for residents, and lower energy demand in some of India's hottest neighborhoods.

Her role is centered on shadowing and supporting the project officers while deepening her understanding of MEER's research methods. Paulami will assist with preparing experiment protocols, tracking progress reports, and documenting the performance of rooftop installations. She will help gather and organize temperature data, observe how urban sites are selected and monitored, and ensure that findings are clearly recorded and shared with the international team. By combining observation with hands-on support, she is gaining valuable experience in how MEER's urban cooling research is designed, implemented, and communicated.

Paulami's internship represents a step forward in strengthening MEER India's research capacity while also nurturing the next generation of climate innovators. Her work will help ensure that the lessons from Pune's rooftops contribute to MEER's broader mission: demonstrating how simple, low-cost reflective technologies can be scaled across cities to provide relief from extreme heat.

# STAYING COOL WITH 3D-PRINTED BRICKS




In the search for sustainable ways to adapt to rising heat, designers are turning to some of the oldest tricks in the book—reimagined with cutting-edge technology. One striking example is Emerging Objects' "Cool Brick", a 3D-printed ceramic brick designed to cool buildings without electricity. Inspired by ancient desert architecture, each brick is printed with a porous, lattice-like structure that absorbs water. As hot, dry air flows through, the stored water evaporates, drawing heat from the air and lowering indoor temperatures naturally.

This low-tech, high-design solution demonstrates how climate adaptation can be both elegant and effective. Cool Bricks work best in hot, arid climates, offering relief where air conditioning is energy-hungry, expensive, or simply unavailable. By relying only on water, they create a passive cooling system that reduces carbon emissions and makes indoor spaces more comfortable in a warming world. It's a reminder that sometimes the smartest climate solutions don't rely on more energy, but on rethinking the materials around us.

# A MESSAGE FROM DR. YE TAO

## Deepening Research and New Partnerships

Dear Members and Supporters,

In recent weeks, I have stepped back from fieldwork and travel to dedicate time to deeper study and writing. This pause has been invaluable for reviewing the latest scientific literature on climate dynamics and for advancing ongoing manuscripts and book projects. My goal is to more clearly articulate the climate predicament we face, and to outline practical steps toward mitigation while imagining inclusive, democratic forms of adaptation that can guide societies through the challenges ahead.

During this reflective period, I was also grateful for opportunities to connect with partners in West Africa. In The Gambia, I met with Kebba Sanyang of Gambia Rising and with the Education Secretariat in Kanifing, where we discussed the urgent challenge of protecting students from intensifying heat stress. I also visited half a dozen schools, from elementary through senior high, to assess their construction styles for suitability relative to MEER's retrofitting strategies. The main takeaways were encouraging: about half of the older buildings are highly suitable for intervention because they are single-story, built with secure metallic trusses and batons, and covered with traditional corrugated metal sheets. While some on-site customization will be required, the general retrofitting concept is broadly applicable across these schools.

These conversations and site visits reaffirm that while rigorous research is essential, the true measure of our work lies in its translation into meaningful relief for those most exposed to climate impacts. MEER's mission is not only to push the boundaries of science and engineering but also to ensure that these innovations directly serve communities on the frontlines.

Looking ahead, I will soon be returning to Sierra Leone to help oversee MEER's next phase of research and engineering projects. This will include advancing passive cooling strategies for urban neighborhoods and developing water conservation systems that can ease the strain of rising temperatures on both people and ecosystems. These initiatives mark an important step in demonstrating how locally grounded, scalable solutions can contribute to global resilience.


Thank you, as always, for your support and solidarity as we continue this work.

Warm regards,
**Dr. Ye Tao**
Founder, MEER

# LAST MONTH'S MEERTALK WITH MIKE TIDWELL

## *"CONFESSIONS OF A CLIMATE ACTIVIST"*

# EXPLORING CLIMATE INTERVENTIONS AT NYC CLIMATE WEEK

MEER was proud to be represented at New York Climate Week by our Senior Project Officer, Arjana Ejupi, who spent the week engaging with partners, panels, and discussions across the city. Arjana joined the Healthy Climate Initiative (HCI) for a standout panel on one of the most urgent questions facing us today: with the climate crisis accelerating faster than expected, is there still hope?


The session brought together voices from across science, advocacy, and ecological restoration. Dr. Soumitra Das, Executive Director of HCI, outlined efforts to protect glaciers and cool the planet. Mike Tidwell, founder of the Chesapeake Climate Action Network, spoke powerfully about the devastating loss of trees in his Maryland neighborhood. Dr. Jyoti Singh, from Columbia Climate School and NASA GISS, explored the mounting risks to agriculture in India. And Dr. Jon Schull, co-founder of the EcoRestoration Alliance, reminded the audience of the potential of ecological restoration as a climate solution. The discussion, moderated by Herb Simmens, highlighted both technical approaches—like cloud brightening, ice protection, and surface reflectivity—and nature-aligned strategies such as soil and habitat restoration.

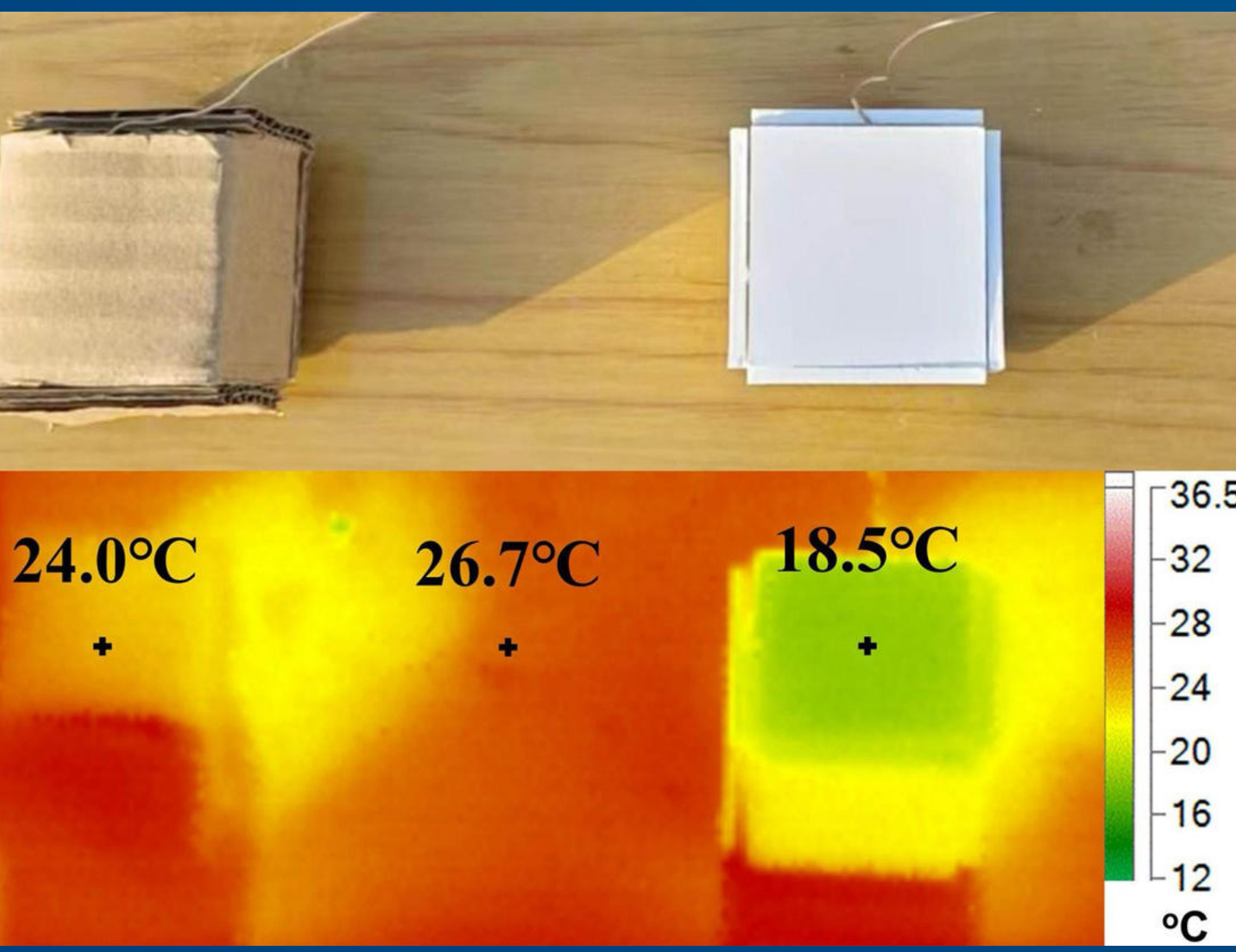
Throughout the week, Arjana carried MEER's message into these conversations: the urgency of acting now, the importance of inclusive governance, and the need to responsibly explore all climate intervention pathways. Her presence at Climate Week ensured that MEER's voice was part of a global dialogue at a moment when, more than ever, the world must recognize that time is running short.

# CLIMATE NEWS

## Radiative Cooling Meets MEER: Scalable Solutions for a Hotter Planet

*Say Goodbye to AC? Scientists Develop a Cooling Sheet That Works Without Power*

A team from China and the US has created a simple plastic sheet that can cool buildings by over 8°C (15°F)—with no electricity, fans, or chemical refrigerants. Made from polymethyl methacrylate (PMMA), the material reflects 96% of sunlight during the day and radiates heat into space at night, cutting heat gain in real-world tests.




At MEER, we see this as part of a growing global wave: low-cost, scalable materials that cool people and buildings without adding to emissions. Just like our bamboo-PET rooftops in Sierra Leone, these advances show that passive cooling is possible—and urgently needed.

READ MORE

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# PODCAST

WITH

## DAVID SPRATT

Risk Realism: Cooling a Livable Planet

LISTEN TO THE PODCAST:

YouTube

# FEEDBACK CORNER

Thank you for continuing on this journey with us. Our MEER newsletter is created for you—our community of supporters, readers, and changemakers—and we're deeply grateful for the time you take to stay connected with our work. Each edition is our way of sharing progress, ideas, and opportunities to act together on climate solutions.

We want this space to truly serve you, so if you have any thoughts on how we can make it more useful, engaging, or inspiring, please don't hesitate to reach out. Your feedback helps us grow and ensures we're bringing you the updates that matter most. You can share your suggestions anytime by emailing us at info@meer.org—we'd love to hear from you.