Confederation of Indian Industry

On the occasion of

World Environment Day

SYMPOSIUM IN TECHNOLOGIES ENABLING WASTE TO WORTH TRANSFORMATION

Reimagining Resources for a Greener Tomorrow

08 June 2026 | New Delhi

- REPORT -

Background:

World Environment Day is the United Nations' flagship platform for promoting environmental awareness and action worldwide. Celebrated annually on 5 June since 1973, it serves as a global call to address pressing environmental challenges, including climate change, pollution, biodiversity loss, and resource depletion. Each year, a host country and theme are selected to focus international attention on a critical environmental priority, mobilizing governments, businesses, academia, communities, and individuals to drive meaningful change.

World Environment Day 2026 is hosted by Azerbaijan under the theme "Inspired by Nature. For Climate. For Our Future." The campaign highlights the urgent need for climate action and emphasizes the role of nature-based solutions, clean technologies, sustainable production systems, and collective action in building a resilient, low-carbon future. The global movement encourages stakeholders across sectors to accelerate efforts toward climate mitigation, adaptation, and sustainable development.

In alignment with this global agenda, the Confederation of Indian Industry (CII), under its Waste to Worth Initiative, is organizing a symposium on "Technologies Enabling Waste to Worth Transformation" under the theme "Reimagining Resources for a Greener Tomorrow." The symposium supports India's vision of achieving Net Zero emissions by 2070 and advancing a circular and resource-efficient economy.

The symposium will bring together policymakers, industry leaders, technology providers, researchers, start-ups, and sustainability practitioners to explore emerging solutions and strategies for climate action. Key discussions will focus on Carbon Capture, Utilization and Storage (CCUS), circular economy pathways, next-generation waste streams, policy and regulatory developments, resource efficiency, and innovative technologies that can transform waste into valuable resources. Through expert deliberations, knowledge sharing, and collaborative dialogue, the event aims to accelerate sustainable industrial growth and foster the transition towards a low-carbon

Inaugural session:

Confederation of Indian Industry (CII) convened the Symposium on Technologies Enabling Waste to Earth Transformation, bringing together policymakers, scientists, industry leaders, and sustainability practitioners to advance India's circular economy and carbon capture agenda.

The Symposium opened with a keynote address from the Chief Guest, Mr. Amit Verma, Joint Secretary, Ministry of Commerce and Industry, Government of India. Mr. Amit Verma also highlighted the importance of developing India's own carbon verification systems and integrating EPR frameworks into a unified carbon market — enabling Indian industries to claim credit for sustainability investments and compete on equal footing in global trade.

Quote by Dignitaries:

Mr Masood Mallick

Chairman CII National Committee on Waste to Worth Technologies and Managing Director, Re Sustainability Ltd.

Climate action is no longer just an environmental imperative—it is a strategic and economic necessity. The scale of investment required for India's transition is immense, and therefore sustainability, circularity, and carbon management must move from the margins to the mainstream of business and policy. The nexus between circularity and carbon management must become stronger.

Mr Amit Verma

Joint Secretary, Ministry of Commerce and Industry, Government of India

India's net-zero pathway will require a combination of electrification, clean energy, hydrogen, circularity, and carbon capture technologies, with CCUS emerging as a critical enabler of industrial decarbonization while maintaining energy security and economic growth. It is important that India develops strong domestic carbon markets, robust verification systems, and globally recognized sustainability frameworks.

Smt Sunita Verma

Group Coordinator (R&D-E&IT), Ministry of Electronics and Information Technology Govt of India

As India accelerates its digital transformation through data centres, semiconductors, electronics manufacturing, and emerging technologies, sustainability must be embedded into every stage of the value chain. From greener data centres and sustainable electronics manufacturing to circular e-waste management and the adoption of alternative materials, innovation will play a critical role in reducing the environmental footprint of technology while enabling the next phase of India's digital growth.

Dr Neelima Alam

Associate Head and Scientist F, Department of Science and Technology, Govt of India

Every transformative technology begins with research. When India started its CCUS journey, there was no established ecosystem, no large-scale industry adoption, and very limited awareness. From research laboratories and Centres of Excellence to pilot-scale demonstrations and industry partnerships, India's CCUS ecosystem is now progressing from innovation to implementation, creating the foundation for large-scale industrial decarbonization

Mr. Masood Mallick, Chairman, CII National Committee on Waste to Worth Technologies, Group CEO & MD, Re Sustainability Limited highlighted the seminal contribution of the National Circular Economy Framework as the first industry-developed, bottom-up national framework of its kind — a voluntary initiative that began with 6 materials and has since expanded to cover 20 materials in its third edition, with practical, industry-led road maps, targets, and commitments on circularity. He noted that the fourth edition would shift focus from expanding the materials list to measuring effectiveness — examining how the framework is translating into policy, funding availability, and industrialisation on the ground.

Mr. Mallick further stressed the need for India to develop its own model for CCUS rather than adopting frameworks designed for Western economies. " We need a Global South approach to carbon capture, to carbon utilisation. Those of us who have tried the Western model of recycling know this — it fails, it's not scalable. If India has to be the voice of the Global South, where else will the voice come from?" he added.

"Electronics components or systems account for 60% of carbon utilisation — right from the mining up to the manufacturing. At each stage, there are technologies required to reduce emissions. MeitY has taken up the responsibility of bringing the informal sector into the mainstream so that efficient technologies are used for e-waste extraction. MeitY will be able to contribute, and as the talks have begun, we will also be committed to put in some funds in this direction. We are looking forward to contributions from CII on how effectively the ministry can contribute towards this mission," said Smt. Sunita Verma, Group Coordinator (R&D-E&IT), Ministry of Electronics and Information Technology, Govt of India.

Dr. Neelima Alam, Associate Head and Scientist F, Department of Science and Technology, Govt of India, spoke to the imperative of bridging the gap between laboratory-proven technologies and industrial-scale deployment — and the role of shared risk between government and industry in making that transition viable.
Dr. Neelima Alam noted that while sustainable technologies are not yet commercially self-sustaining, the government and industry must share the risk of scaling them. She highlighted DST's innovative co-funding mechanism — beginning at an 85:15 ratio in favour of DST and progressively moving towards 75:25 — as an effective model to encourage industry participation. Pointing to the overwhelming response to the steel CCUS testbed call, with 53 collaborative projects submitted by leading industries and institutions, she underscored the growing momentum of academia-industry partnerships in advancing these technologies.

Publications Released:

The symposium witnessed the release of two significant CII publications:

1. **White Paper: Addressing India's Strategic Needs: Achieving a Circular Carbon Economy through Carbon Capture, Utilization and Storage (CCUS)** — A policy-focused document spanning financial viability, regulatory frameworks, transport and storage infrastructure, technology, energy and hydrogen convergence, and just transition considerations.

2. **Compendium: Circular Carbon Capture, Utilization and Storage Technologies: Innovations for a Net-Zero Future** — A practitioner-focused compilation of emerging CCUS technologies and innovation pathways charting India's route to net zero.

White Paper: Addressing India's Strategic Needs: Achieving a Circular Carbon Economy through Carbon Capture, Utilization and Storage (CCUS)

CII Compendium: Circular Carbon Capture, Utilization and Storage Technologies: Innovations for a Net-Zero Future

Together, the White Paper and Compendium provide a comprehensive resource for advancing CCUS in India by combining strategic policy recommendations with practical technology insights and innovation pathways. They serve as valuable references for policymakers, industry, researchers, technology providers, and investors to foster collaboration, accelerate deployment of CCUS solutions, and support India's transition towards a circular carbon economy and net-zero future.

CII Young 4R Awards 2026:

The symposium also witnessed the presentation of the CII Young 4R Awards, recognising outstanding innovation, research excellence, and commitment to advancing sustainable solutions through the principles of Reduce, Reuse, Recycle, and Recover — catalysing the next generation of circular economy champions.

This edition recognized outstanding young innovators for their impactful solutions addressing sustainability and circular economy challenges. Ms Kanika Yadav from **The NorthCap University** was declared the Winner for her project "Agrisage." The Runner-up award was presented to Mr Raghav Vats from **The NorthCap University** for his project "Landfill Methane Monitoring and Mitigation System." The Award of Merit was conferred on Ms Chayya Rawat from **Netaji Subhas University of Technology** for her project "Concrete under CO_2 Curing."

The symposium concluded with delegates joining in a collective pledge led by Mr. Masood Mallick, committing to reduce waste, conserve resources, and support efforts to protect nature and cut emissions. "Let us turn commitment into action — today, every day, beyond words, and into action," he urged, calling on every leader, innovator, and citizen to carry the resolve of World Environment Day forward.

On this World Environment Day, I pledge to act for the climate and protect our planet.

“I commit to reducing waste, conserving resources, adopting sustainable practices, and making responsible choices in my daily life and work.
I will support efforts that reduce emissions, protect nature, and build a cleaner, greener, and more resilient future.
I will inspire others to join this movement, recognizing that climate action is a shared responsibility.
Together, let us turn commitment into action and create a sustainable future for generations to come.
I pledge to turn climate commitment into climate action—today and every day.”
Let us take this opportunity not just to talk, but to act decisively—as leaders, innovators, and responsible citizens.

As part of its commitment to environmental sustainability, CII proudly supports the Government of India’s **Ek Ped Maa Ke Naam** initiative, encouraging individuals and organisations to plant a tree in honour of their mothers. This meaningful campaign promotes ecological conservation while inspiring collective action towards building a greener, healthier, and more sustainable future for generations to come.

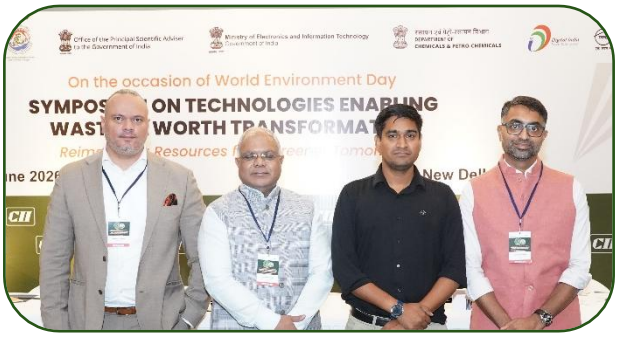
Past Edition:

In 2025, the Confederation of Indian Industry (CII) hosted a symposium titled "Technologies Enabling Waste to Worth Transformation" under the theme "Shaping a Resilient Tomorrow through a Circular Economy." The event aligned with India's Net Zero 2070 target and explored innovations in managing diverse waste streams, including plastics, e-waste, solar panels, and tyres. Through expert deliberations, policy discussions, technology showcases, and networking opportunities, the symposium facilitated knowledge exchange and accelerated the adoption of sustainable and circular economy practices.

Panel Discussions (Sessions):

The symposium was featured 5 sessions and attended by 200+ delegates spanning industry leaders, sustainability professionals, scientists, policymakers, researchers, and startups — reflecting India's growing resolve to place circularity and carbon capture at the centre of its industrial and climate strategy.

Session 1: Climate Action – Accelerating Solutions for a Resilient Future



- Climate commitments are growing across sectors, but the bigger opportunity lies in translating intent into verifiable, ground-level action.
- Green finance needs policy-backed democratisation to move beyond large corporates and reach smaller enterprises and high-impact projects.
- Technology — from AI-driven logistics to blockchain traceability — is already delivering measurable sustainability outcomes and holds greater potential at scale.
- Urban planning must treat water bodies and green infrastructure as non-negotiable elements, not afterthoughts.
- Robust monitoring frameworks, for both corporates and government bodies, will determine whether climate commitments hold real credibility.
- Inclusion of smaller enterprises, off-grid communities, and ground-level implementers is essential to building meaningful and lasting climate resilience.

Session 2: Driving a Circular Carbon economy through Innovation and carbon capture to achieve Net -Zero

- The core challenge for CCUS in India is not technology readiness but economic viability — carbon needs a credible price to attract investment at scale.
- A hub-and-spoke industrial cluster model, where CO_2 supply, land, and utilities are co-located, offers a practical and commercially viable blueprint for near-term deployment.
- Sustainable aviation fuel and industrial chemicals represent high-value, underexplored end-markets for captured

carbon, with strong commercial logic once mandates are in place.

- Skilled human capital and ground-level project execution capacity are as important as finance and technology in determining whether CCUS projects succeed.
- India's upcoming carbon trading scheme, if designed with clear targets, monitoring, and a credible starting price, can be a pivotal instrument in shifting industry behaviour.
- Progress requires simultaneous movement across technology, policy, infrastructure, and cross-sector collaboration — no single lever is sufficient on its own.

Session 3: Driving Circular Economy through Policy Action in India's Current Landscape

- India's waste streams represent a significant untapped economic resource and reframing them as raw material rather than a problem is the mindset shift needed to unlock circularity at scale.
- EPR frameworks are well-designed on paper, but the priority must shift to trust-building, consistent implementation, and pricing stability before introducing further policy complexity.
- Near-source sorting and AI-driven aggregation models can dramatically reduce inefficiencies across the recycling supply chain, making the economics work for more players.
- Transparency in procurement — requiring manufacturers to disclose material content, carbon footprint, and end-of-life obligations — can be a powerful and practical policy lever.
- Digitalization and cross-sector collaboration are essential for scaling circular economy solutions beyond isolated pilots to national impact.
- Policy continuity and ground-level capacity building at the regulator level are just as important as the ambition of the regulations themselves.

Session 4: Technologies advancing circular solutions for a greener tomorrow

- Waste-to-resource technologies are ready and growing, but bankable contracts, realistic plant design, and secure offtake agreements are the real enablers of scale.
- Water recovery deserves far greater attention in industrial circularity discussions — it is a resource under significant stress and a major lever for both environmental and commercial performance.
- Circularity solutions must be designed product-by-product and geography-by-geography — a single technology or policy approach cannot address the diversity of India's waste streams.
- Consumer engagement, particularly through youth, is essential to closing the loop — awareness alone is insufficient without ecosystem-level infrastructure and the right incentive structures.
- ESG and carbon footprint reporting are fast becoming commercial prerequisites in global markets, making sustainability investment a business necessity rather than a voluntary choice.
- Collaboration across the entire value chain — from municipalities and producers to recyclers, retailers, and consumers — is the only way to move circularity from pilot to systemic scale.

Session 5: Next-Generation Waste: From Landfill Burden to Resource Opportunity

- Decentralisation is not just a philosophical preference but a commercially and logistically superior model for waste processing — processing waste close to its source preserves quality, cuts transport costs, and dramatically improves resource recovery rates.
- India's existing industrial boiler infrastructure in urban areas offers a ready, underutilised offtake channel for pelletised waste fuel — eliminating the need for expensive new assets.
- Technologies proven in adjacent industries — AI, route optimisation, QR-based traceability — are directly transferable to waste management and can accelerate the sector's formalisation.

- Sustainability does not require large capital outlays; embedding it into operational design through continuous improvement can generate savings that then fund larger green investments.
- The polluter-pays principle, combined with community-level ownership of waste processing, can shift mindsets and create the accountability that top-down enforcement alone cannot achieve.
- Strong policy signals — both incentives and penalties — remain essential to bring entrepreneurs and industry into the waste-to-resource ecosystem at the scale and speed India needs.

Key highlights:

200+ participants from industry, government, academia, startups, and leading sustainability organisations.

25+ distinguished speakers sharing insights on emerging trends, policies, and technologies.

5 focused technical sessions covering waste management, circular carbon economy, resource efficiency, and innovative waste-to-worth solutions.

Showcased successful practices and encouraged organisations to accelerate the transition from waste to value.

Facilitated technology transfer, collaboration, and knowledge exchange to drive innovation and scale circular economy solutions.

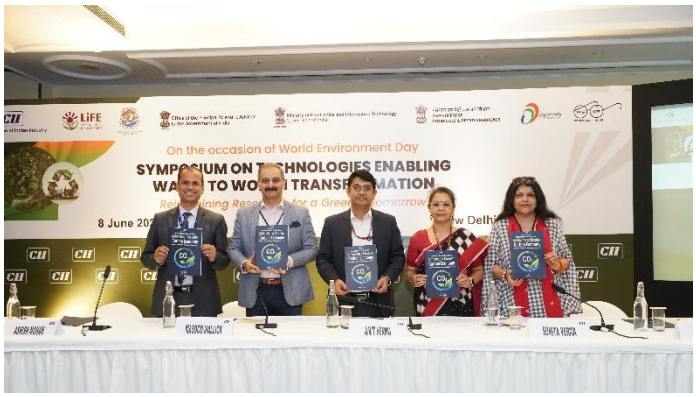
Top Social Media post and Booklets

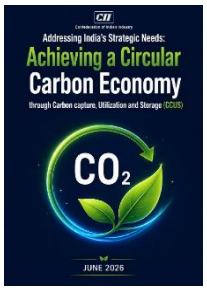
Partner booklet

Speaker booklet

Agenda

Multiple Hues of Waste to Worth Symposium





Confederation of Indian Industry

The Confederation of Indian Industry (CII) works to create and sustain an environment conducive to the development of India, partnering Industry, Government and civil society through advisory and consultative processes.
CII is a non-government, not-for-profit, industry-led and industry-managed organisation, with over 10,500 members from the private as well as public sectors, including SMEs and MNCs, and an indirect membership of over 365,000 enterprises from 332 national and regional sectoral industry bodies.

For more than 130 years, CII has been engaged in shaping India's development journey and works proactively on transforming Indian Industry's engagement in national development. CII charts change by working closely with the Government on policy issues, interfacing with thought leaders, and enhancing efficiency, competitiveness, and business opportunities for industry through a range of specialised services and strategic global linkages. It also provides a platform for consensus-building and networking on key issues.

Through its dedicated Centres of Excellence and Industry competitiveness initiatives, promotion of innovation and technology adoption, and partnerships for sustainability, CII plays a transformative part in shaping the future of the nation. Extending its agenda beyond business, CII assists industry to identify and execute corporate citizenship programmes across diverse domains, including affirmative action, livelihoods, diversity management, skill development, empowerment of women, and sustainable development, to name a few.

For 2026-27, CII has identified "Accelerating Competitiveness: Growth, Resilience, Inclusion, Sustainability, Trust" as its theme, prioritising five key pillars. During the year, CII will align its policy advocacy, institutional initiatives, partnerships, and outreach to support Indian industry in strengthening these five interconnected pillars of competitiveness.

With 70 offices, including 12 Centres of Excellence, in India, and 9 overseas offices in Australia, Egypt, Germany, Indonesia, Singapore, UAE, UK, and USA, as well as institutional partnerships with 255 counterpart organisations in 102 countries, CII serves as a reference point for Indian industry and the international business community.

Confederation of Indian Industry
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