

# THE GREEN CLOCK

## *ESG MATTERS*

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## Editor's Note

Dear Readers,

Welcome to the Fifth Edition Vol. 2 of our newsletter, '**The Green Clock: ESG Matters**'. As the global focus on sustainability intensifies, businesses increasingly recognise the importance of integrating ESG considerations into their operations. From reducing carbon footprints to enhancing social impact, companies embrace a more holistic approach to value creation beyond financial performance. This edition explores the latest trends, developments, and best practices in sustainability and responsible corporate conduct. We also look closely at key sustainability trends shaping the business world, from the rise of renewable energy to the growing emphasis on diversity and inclusion. We hope you find this edition of our newsletter informative and inspiring as we journey towards a more sustainable and responsible future.

Warm regards,

[T S Vishwanath]

## Beyond the Ban: How India is Rethinking Plastic

Plastic pollution has become one of India's most urgent environmental challenges, with the country generating over 3.5 million tonnes of plastic waste every year. The ubiquity of plastic in daily life, used in packaging, transport, storage, and retail, makes tackling this issue both complex and critical. Recognising the gravity of the problem, India has taken a series of bold regulatory steps in recent years, aiming to reduce dependence on single-use plastics and improve waste management systems.



The government's 2022 ban on 19 single-use plastic items marked a significant shift in policy direction. The prohibition was a visible expression of the country's commitment to environmental sustainability, from plastic cutlery to straws and polystyrene packaging. Enforcement drives across states led to large-scale seizures of banned items, and awareness campaigns brought plastic waste into the spotlight. Complementing this effort, India also introduced a strengthened Extended Producer Responsibility (EPR) framework, making companies legally accountable for managing the end-of-life disposal of their plastic packaging. Thousands of producers and brands have since registered under the new EPR regime, with

obligations to collect and recycle set against measurable targets.

Despite this progress, on-ground implementation tells a more layered story. Enforcement varies widely across states and cities, with many rural and peri-urban areas still reporting open use of banned items. Monitoring mechanisms remain under-resourced, and compliance often falters in the face of market resistance or administrative gaps. The informal sector, which recycles the bulk of India's plastic waste, continues to operate on the margins, lacking formal recognition, safety nets, or structured integration into the waste economy. This disconnect not only limits efficiency but also poses serious social equity concerns.

Further, the infrastructure needed to support a plastic-free future is still under construction. Most urban local bodies struggle with segregated waste collection, and high-quality recycling infrastructure is limited to a few metropolitan zones. While private innovation in biodegradable alternatives and circular packaging is growing, these solutions remain cost-prohibitive or logistically unviable for many businesses and consumers.

Without addressing affordability and accessibility, behaviour change will remain a slow, uneven process.



As India looks ahead, the road to sustainable plastic management will depend on collaborative systems beyond bans and punitive measures. Integrating the informal workforce into formal systems, upgrading recycling technology, and investing in public education around waste are vital steps. More importantly, the transition to a circular economy must be enabled by policy nudges that reward sustainable design, responsible consumption, and transparent reporting.



India's effort to beat plastic pollution is not without merit; it has laid the groundwork for regulatory reform and sparked critical conversations around plastic use. Yet, the challenge remains steep. Success will come not from eliminating plastic altogether, but from reimagining how we design, consume, and recover it. The shift from a linear to a circular plastic economy is both a necessity and an opportunity—and one India cannot afford to miss.

## Five Plastic Alternatives Made in India

Across India, innovators harness everything from sugarcane bagasse and coconut husks to seaweed and fungal mycelium to craft materials that naturally break down without harming ecosystems. These homegrown solutions not only curb plastic waste but also create new livelihoods and circular-economy opportunities—here are five standout alternatives that are already making an impact.



### 1. Sugarcane Bagasse Tableware

Made from leftover sugarcane pulp, this biodegradable alternative is heat-resistant and composts in under 90 days. Popular across Maharashtra and UP.

### 2. Areca Palm Leaf Plates

Harvested from fallen leaves, these sturdy, chemical-free plates are being manufactured widely in Karnataka and exported globally.

### 3. Corn-Starch-Based Bioplastics

IIT Delhi and IISc Bengaluru have developed PLA and starch blends for packaging that break down naturally without releasing toxins.

### 4. Seaweed Packaging Films

CSIR and IIT Guwahati are turning red algae into clear, edible-grade plastic films suitable for food wrapping.

### 5. Plastic-Sand Bricks

Innovators like Rhino Machines are transforming plastic waste into durable construction bricks, offering a sustainable path for upcycling.

## News From the World

### Carbon Pricing Hits USD 100 Billion as Coverage Expands

In 2024, carbon pricing mechanisms worldwide generated a record USD 100 billion in public revenues, more than half of which was channelled into environmental protection, infrastructure upgrades, and development projects. According to the World Bank's State and Trends of Carbon Pricing 2025 report, 80 instruments are now in operation, five more than a year ago, with emissions trading systems driving much of this growth in major middle-income economies. Roughly 28 per cent of global greenhouse-gas emissions are now subject to a price signal, covering nearly two-thirds of global GDP and about half of emissions from the power and industrial sectors. Meanwhile, compliance-driven demand for carbon credits nearly tripled in 2024, even as the voluntary market remained flat and nature-based removal credits continued to command a premium.

For businesses, the expanding reach and rising revenues of carbon pricing signal both a cost and an opportunity. Companies in covered sectors must now factor carbon costs into product pricing, supply-chain decisions, and risk assessments, while exploring efficiency gains and low-carbon investments to contain exposure. At the same time, the surging compliance market for credits opens new avenues for firms to monetise emissions reductions or to invest in high-quality offset projects. Early movers who integrate carbon pricing into strategic planning can turn regulatory compliance into a competitive advantage, positioning themselves as leaders in the transition to a net-zero economy.



### Europe's ETS Reunion: EU and UK to Link Carbon Markets

In a landmark decision following the first-ever EU-UK summit, the European Commission and the UK government have committed to formally work towards integrating their Emissions Trading Systems (ETS), potentially reuniting carbon markets split by Brexit. Under the proposed arrangement, carbon allowances issued by either jurisdiction would be mutually recognised, enabling cross-border trading of emissions permits and bolstering market liquidity. This move builds on the EU's ETS, which has covered energy, steel, cement, and aviation since 2005, and the UK's standalone ETS launched in 2021. Both sides envision reciprocal exemptions under their respective Carbon Border Adjustment Mechanisms (CBAM), reducing trade friction for exporters. Crucially, linkage will proceed only if the UK's emissions cap and reduction trajectory match or exceed the EU's targets, raising the bar for London's climate policy.



The forthcoming ETS alignment promises both cost savings and strategic opportunities for businesses operating across Europe. Harmonised carbon pricing could stabilise allowance prices, streamline compliance processes, and eliminate duplicate reporting obligations for multinationals. Companies that proactively adjust their emissions forecasts and invest in low-carbon technologies will be better positioned to capitalise on a larger, more liquid permit market. Moreover, mutual CBAM exemptions will reduce tariff risks for exporters, while clear regulatory convergence enhances long-term planning certainty, encouraging investors to back green innovation and infrastructure across both markets.

### Microsoft's Historic 1.24 M-Tonne Biochar Carbon Removal Agreement

On May 21, Microsoft announced a landmark 10-year partnership with Bolivia-based Exomad Green to remove nearly 1.24 million tonnes of CO<sub>2</sub> through biochar, marking the largest biochar carbon removal deal in history. Under the agreement, Exomad Green will scale its pyrolysis facilities currently removing 120,000 mtCO<sub>2</sub>e annually across two sites and planning three more and establish a Forest Monitoring Centre to trace sustainably sourced biomass. Biochar produced from forestry residues will be applied to soils where it locks carbon for centuries and enhances crop yields. Credits will be certified by Puro. earth and verified via Carbonfuture's MRV+ digital platform. Microsoft, which first collaborated with Exomad in December 2023, aims to sequester 1 million tonnes of CO<sub>2</sub>e each year by 2027 en route to its carbon-negative target by 2030, while generating co-benefits for over 250,000 people in local communities.

This deal highlights both the rising market value of durable carbon removal and the necessity of rigorous measurement, reporting, and verification systems. With biochar credits trading near USD148 per tonne, companies can monetise emissions-reduction efforts or secure high-integrity offsets to hedge future carbon costs. Investing in scalable pyrolysis technology and partnering with trusted CDR providers can open new revenue streams, strengthen supply-chain resilience, and bolster sustainability credentials. As carbon pricing and regulatory scrutiny intensify, early adoption of traceable, community-integrated removal projects like this will be critical for risk management and for demonstrating leadership in the transition to a net-zero economy.



## News From India

### SEBI Strengthens ESG Bond Framework to Elevate Transparency and Integrity.

On June 5, 2025, the Securities and Exchange Board of India (SEBI) introduced a comprehensive framework governing the issuance and listing of social bonds, sustainability bonds, and sustainability-linked bonds (SLBs), while green bonds remain under separate rules. Issuers must now provide detailed pre-issuance disclosures covering project objectives, decision-making processes, and tracking mechanisms, followed by annual post-issuance reports on fund utilisation and unspent proceeds. All ESG debt instruments require alignment with recognised global standards such as the ICMA Principles or the Climate Bonds Standard, and an independent third-party reviewer must validate adherence. For SLBs, issuers must publish their sustainability strategy, key performance indicators (KPIs), and sustainability performance targets (SPTs), with reviewers certifying both the ambition and relevance of those targets. These new mandates aim to reinforce investor confidence by ensuring that ESG-labelled bonds deliver verifiable social and environmental outcomes.

This enhanced disclosure and third-party review requirements mean higher upfront compliance costs and the need to integrate robust ESG monitoring systems. However, meeting these stringent standards can unlock deeper investor pools and potentially lower funding costs as credibility and transparency improve. Companies that proactively align their debt instruments with global benchmarks and establish clear impact metrics will be better positioned to attract capital, differentiate themselves in the market, and demonstrate leadership in sustainable finance.

### Coal India's USD 3 Billion Renewable Pivot Fuels Green Ammonia



Coal India Ltd. has unveiled plans to invest INR 250 billion (approximately USD 3 billion) in the development of 4.5 gigawatts of solar and wind capacity as part of its new clean-energy strategy. These projects, which will be built alongside pumped-hydro storage, are intended primarily to power AM Green Ammonia's planned 5 million tonnes-per-annum green ammonia facilities in Kandla and other locations, under a non-binding Memorandum of Understanding signed in early June 2025. While Coal India continues to expand its coal fleet by some 80 GW to meet India's growing power demand, the renewable initiative reflects a commitment to offset emissions and support the nation's 500 GW renewables by 2030 and net-zero

by 2070 goals. No firm construction timeline was disclosed, but the MOU—witnessed by Coal India's chairman and AM Green's leadership—signals a strategic shift towards integrating large-scale clean power into industrial operations.



Coal India's dual approach highlights the growing importance of integrating renewable energy into traditional heavy-industry supply chains. Companies in energy-intensive sectors should evaluate long-term partnerships with utilities that can offer dedicated green power off-take agreements, thereby reducing future carbon liabilities and stabilising energy costs. The move also underscores the value of flexible storage solutions, such as pumped-hydro, in ensuring grid reliability for intermittent resources. Early engagement in similar MoUs and investment in off-grid renewables can provide firms with competitive advantages in regulatory compliance, sustainability reporting, and cost management as India's energy landscape continues its rapid transition.

### **India's Climate Finance Taxonomy Set to Mobilise USD 2.5 Trillion**

On June 5, 2025, India's Ministry of Finance released a draft Climate Finance Taxonomy designed to channel up to USD 2.5 trillion in investments by 2030 into climate-aligned activities. Open for expert and public comments until June 25, the framework draws heavily on leading international standards from the EU and UK to bolster investor confidence with a globally consistent classification. It distinguishes between "climate-supportive" activities such as renewable power projects, adaptation measures, and climate R&D and "transition-supportive" initiatives that enhance efficiency or reduce emissions intensity in hard-to-abate industries like steel and cement. By defining clear eligibility criteria, the taxonomy aims to accelerate funding for sectors critical to India's net-zero by 2070 goal, a 45% reduction in emissions intensity by 2030, and a 50% non-fossil power mix by 2030.

The taxonomy offers a roadmap to unlock green capital and demonstrate sustainability credentials. Companies operating in energy, manufacturing, mobility, agriculture, or water security should assess their projects against the draft criteria to secure favorable financing and attract climate-focused investors. Early alignment can reduce funding costs, streamline ESG reporting, and position firms as preferred partners in public-private partnerships. As regulators finalize the taxonomy, proactive engagement in the consultation process and adaptation of internal classification practices will be key to capturing the influx of climate finance and driving competitive advantage in the transition economy.





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