



Investing in a Sustainable Future

Edition – November 2025

"It's not climate change that needs to be tackled. It is the political power of the fossil fuel industry." - Richard Denniss, Chief Economist

The global carbon credit market, valued at USD 633.87 billion in 2024, is expected to soar to USD 10,552.12 billion by 2034, growing at an impressive 32.5% annually. As climate policies tighten and more companies commit to net-zero goals, carbon credits are becoming a vital part of how the world tackles emissions.

Yet, behind this rapid growth lie important questions - How reliable are these credits? Who ensures their integrity? And do they truly deliver the environmental impact they promise? This edition of our newsletter takes a closer look at the carbon credit ecosystem, exploring its market trends, regulatory evolution, accounting practices, and verification systems. It also dives into the key issues of permanence and transparency, which are shaping global confidence in carbon markets today.

Understanding Carbon Credits:

A carbon credit is a tradable instrument (typically a virtual certificate) that conveys a claim to avoided GHG emissions or to the enhanced removal of GHG from the atmosphere. Credits allow claims to be transferred from an entity that generated the avoided emissions or enhanced removals to a buyer. The buyer of a carbon credit can then "retire" it to count the avoided emissions or enhanced removals towards a climate change mitigation goal or as a contribution to global mitigation efforts.



Carbon credits are certified by either governments or independent certification bodies (aka "carbon crediting programs"). A single credit is typically denominated to represent the equivalent of *one metric tonne* of carbon dioxide (CO₂) avoided or removed.

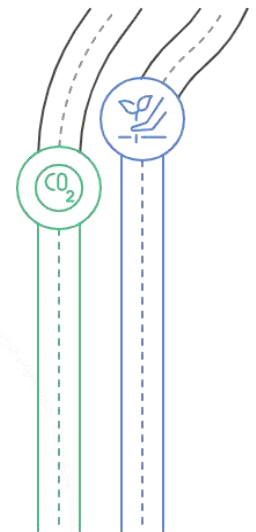
Carbon Credit Vs Carbon Offset

Carbon Credit

Helps meet emission reduction goals through tradable certificates.
Ex: A wind farm earns credits for clean energy it produces.

Carbon Offset

Neutralizes unavoidable emissions by investing in projects.
Ex: An airline buys credits from that wind farm to offset passenger's flight emissions.



How Are Carbon Credits Generated?

Carbon credits are created through projects that reduce, avoid, or remove greenhouse gas (GHG) emissions, falling into two categories:

- Nature-based solutions** - use ecosystems to capture carbon through reforestation, soil restoration, wetland recovery, and forest conservation (REDD+), supporting both biodiversity and local communities.
- Technology-based solutions** - rely on innovations like direct air capture (DAC), methane capture, bioenergy with carbon capture & storage (BECCS), and carbon mineralization, offering scalable and measurable emission reductions.

However, carbon credits should complement and not replace a strong decarbonisation strategy. A credible approach for carbon credits rests on three key pillars:



Measuring emissions accurately



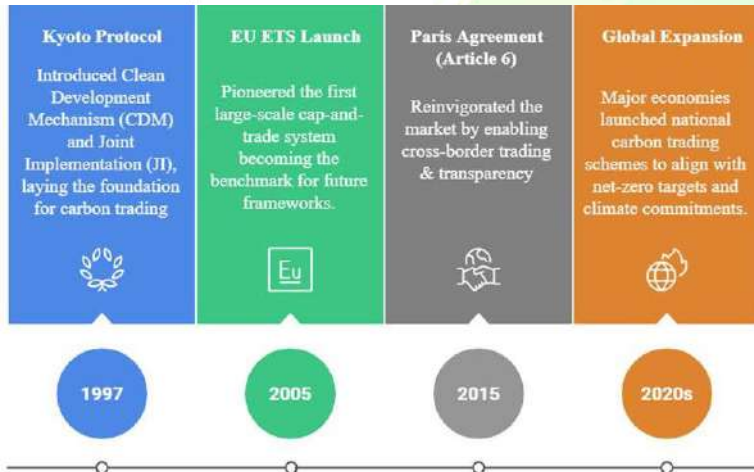
Reducing them wherever possible



Contributing by investing in verified carbon projects



The Evolution of Carbon Credit



Global Framework for carbon credit market

System	Launch	Key Feature	Goal
European Union (EU) - EU ETS	2005	World's largest cap-and-trade covering power, industry, and aviation.	55% cut by 2030, Net-zero 2050
China (CN) - National ETS	2021	Power sector-focused; expanding to industry.	Carbon neutrality 2060
USA (US) - California Cap and Regional Greenhouse Gas Initiative (RGGI)	2013 / 2009	State-level systems; strong voluntary carbon market; corporate-led offset projects by Microsoft, Amazon, Delta, etc.	Reduce emissions to 50 – 52% below 2005 levels by 2030

Inside India's Carbon Credit Framework

Established under the Energy Conservation (Amendment) Act, 2022, and notified by the Ministry of Power on June 28, 2023, the Carbon Credit Trading Scheme (CCTS) marks a major step toward developing a national carbon market. Managed by the Bureau of Energy Efficiency (BEE) and built on the Perform, Achieve, and Trade (PAT) mechanism, it introduces systems for carbon credit issuance, verification, and trading. The scheme supports compliance, enables credit exports, and positions India as a potential "carbon exporter". Trading is set to begin in January 2026, initially including steel, cement, fertilizer, power sector, etc.

Carbon Accounting: Measuring What Matters

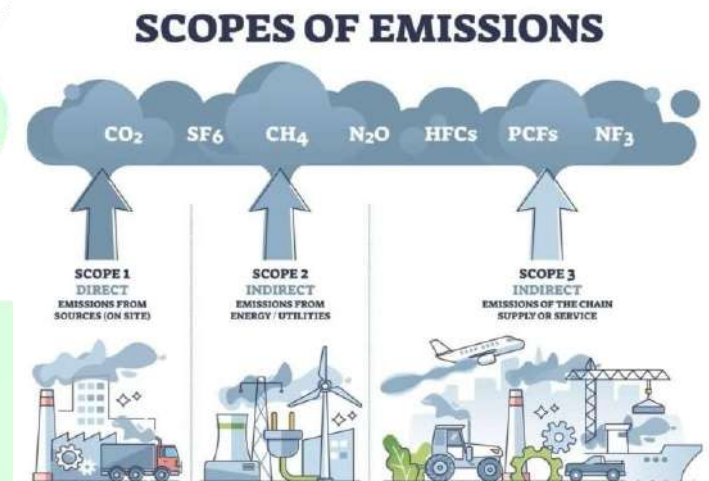
Carbon accounting is the systematic process of quantifying, managing, and reporting greenhouse gas (GHG) emissions linked to an organization, product, or activity. Acting as a climate ledger, it converts energy use and operations into measurable carbon impacts, helping organizations understand, reduce, and decarbonize their footprint.

How Carbon Accounting Works

Define Boundaries: Determine the scope enterprise, facility, or product lifecycle.

Identify Emission Sources: Include direct and indirect activities; fuel use, electricity, logistics, waste, and supply chain operations.

Categorize by Scope:



Collect Activity Data: Gather quantitative inputs such as fuel consumption, energy use, transportation mileage, etc.

Calculate Emissions: Apply emission factors to convert activity data into CO₂ equivalents (CO₂e). {Emissions (CO₂e) = Activity Data X Emission Factor}

Aggregate and Analyze: Sum emissions across scopes and identify hotspots for reduction.

Report and Strategize: Use results to set targets, comply with frameworks (GHG Protocol, CDP, BRSR), and support compliance with climate regulations and investor expectations.



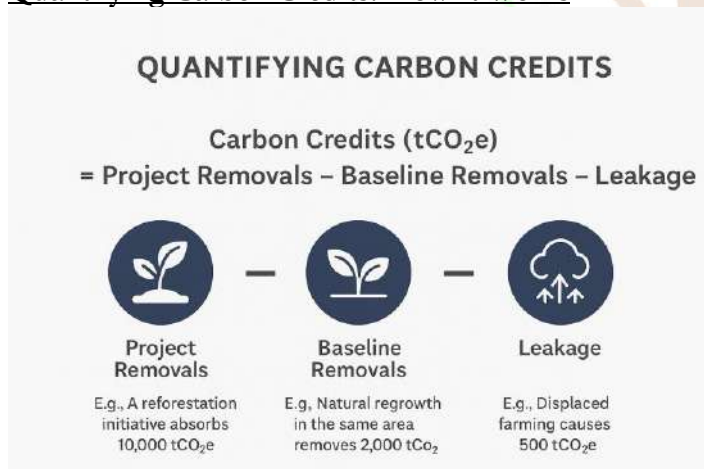
Why Carbon Accounting Matters?

Carbon accounting translates climate impact into actionable data. It empowers businesses to:

- Track progress toward net-zero and science-based targets.
- Enhance regulatory compliance and ESG disclosure.
- Strengthen investor confidence through transparent reporting.
- Support global climate goals under the Paris Agreement.

In short, carbon accounting transforms 'sustainability' from intent to measurable action making climate responsibility both quantifiable and accountable.

Quantifying Carbon Credits: How It Works



Carbon Credit Permanence

A carbon credit represents one metric tonne of CO₂ reduced, removed, or avoided, but its real impact depends on permanence, the duration carbon remains out of the atmosphere, often a century or longer. Events like wildfires or illegal logging can release stored carbon, diminishing climate benefits. To manage such risks, carbon standards employ risk mitigation mechanisms, including:

- Buffer pools:** A proportion of credits are held in reserve to compensate for unintentional reversals caused by natural or human-induced events.
- Permanence tiers:** Projects employing geological sequestration, mineralization, or direct air capture with storage (DACCS) are higher in permanence, as they can retain CO₂ securely for millennia.

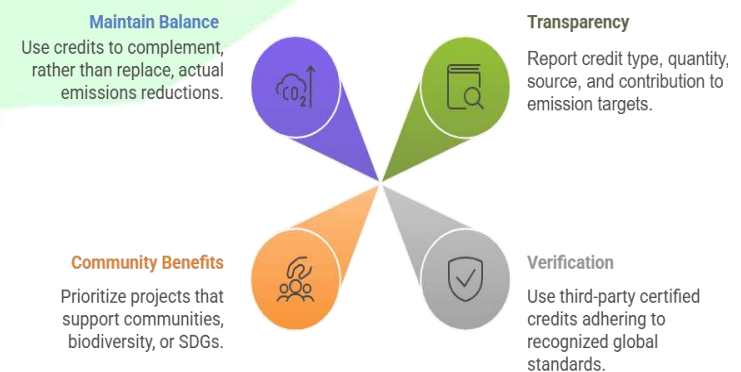
Are Carbon Credits Just a License to Pollute?

While designed to offset unavoidable emissions, carbon credits are often misused for greenwashing thereby allowing companies to appear sustainable without making genuine emission reductions. Several forestry projects in Africa and Asia have overstated their climate impact; for instance, in Kenya, credits were sold even though the forests faced minimal deforestation risk, while in India, tree-planting initiatives in Andhra Pradesh and Odisha were criticized for inflated carbon claims and limited community gains. Without rigorous verification, transparent data, and independent oversight, carbon credits risk becoming "get-out-of-jail-free cards," enabling continued fossil fuel dependence. Experts stress that carbon markets must uphold integrity; high-quality credits should demonstrate true additionality and deliver tangible social and environmental benefits, rather than acting as financial loopholes that delay real decarbonization.

Carbon Credits in ESG Reporting: Integrating Them Responsibly

To address ethical concerns, companies must incorporate carbon credits into their ESG strategies with transparency and accountability. In India, SEBI's BRSR framework encourages the disclosure of emission reduction and offset initiatives, promoting alignment with national climate goals.

To ensure credibility, companies should:



When applied with integrity, carbon credits can enhance ESG performance, strengthen stakeholder and investor confidence, and contribute to meaningful, real-world decarbonization.



Corporate Carbon Credit Strategies and Reporting

- Apple Inc. - Achieved a 60% reduction in GHG emissions since 2015 and retired 471,400 tCO₂e credits in 2024 to maintain carbon neutrality. [Apple Environmental Progress Report 2025](#)
- Infosys Ltd - Holds a PAS 2060-verified carbon neutrality declaration, with detailed offsets (projects + volumes) disclosed in its ESG Databook 2025. [Infosys Carbon Neutrality Declaration 2025](#)

- Tata Steel Ltd. - Exploring Nature-based Solutions (NbS) and participation in India's CCTS and ICM to earn and trade Carbon Credit Certificates (CCCs) in the voluntary market. [Tata Steel Integrated Report FY 2024-25](#)
- Mahindra Group - Investing INR 12,000 million in a 150 MW hybrid wind - solar project to achieve 100% renewable energy by 2030, offset 420,000 tCO₂ annually, and align with SBTi, EP100, and internal carbon pricing goals. [Mahindra & Mahindra Sustainability Report 2025](#)

Strengthening India's Sustainability Framework: MCA's Response to Lok Sabha on ESG Alignment:

Lok Sabha Unstarred Question No. 1267 | Dated: 28th July 2025

The Ministry of Corporate Affairs (MCA) recently responded to a Lok Sabha query on the Government's efforts to align India's ESG norms with global sustainability frameworks. The response highlights measures by regulatory bodies like SEBI and the Ministry of MSME to strengthen India's ESG ecosystem, ensuring transparency and global comparability

[Business Responsibility and Sustainability Reporting \(BRSR\)](#)

SEBI has mandated ESG disclosures through the BRSR.

- Applicable to the top 1,000 listed companies (by m-cap) - voluntary from F.Y. 2021-22, mandatory from F.Y. 2022-23.
- Other listed entities, including those on the SME Exchange, may disclose voluntarily.

[Global Alignment](#)

BRSR is based on the National Guidelines on Responsible Business Conduct (NGRBCs, 2019) and is interoperable with international frameworks like the ISSB and EU-CSRD. Listed companies may cross-reference their disclosures to maintain consistency with global reporting standards.

[Measures to Mitigate Greenwashing](#)

To safeguard the integrity of ESG disclosures and prevent greenwashing, SEBI has implemented several regulatory mechanisms:

- **BRSR Core:** A streamlined subset of critical Key Performance Indicators (KPIs) requiring independent assurance/assessment.
- **Applicable glide path:**
 - Top 150 entities: F.Y. 2023-24
 - Top 250 entities: F.Y. 2024-25
 - Top 500 entities: F.Y. 2025-26
 - Top 1,000 entities: F.Y. 2026-27
- **ESG Value Chain Disclosures:** Applicable on a voluntary basis for the top 250 listed entities from F.Y. 2025-26, with voluntary assurance from F.Y. 2026-27.
- **Green Debt Securities:** Issuers must follow defined norms to prevent greenwashing and appoint an independent reviewer for fund verification and impact assessment.

[Industry Standards on BRSR Core](#)

The Industry Standards Forum has developed BRSR Core implementation standards to promote uniformity, ease of compliance, and transparency across sectors.

[MSME Initiatives](#)

Under the World Bank-supported RAMP Scheme (Raising and Accelerating MSME Performance), the Ministry of MSME is conducting training and workshops for MSMEs, industry associations, and state officials to build ESG capacity and awareness.

[Conclusion](#)

MCA and SEBI's initiatives are steering India toward a globally aligned ESG framework, promoting transparency, countability, and sustainable business practices across sectors.

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