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**ANNUAL REVIEW OF**  
**SUSTAINABLE**  
**CAPITAL**

**2025 – 26**

*A synthesis of global carbon market developments, green finance trends,  
India policy shifts, and research highlights from SCRF fellows.*

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## FOREWORD

*By Shaurya Ritwik, Founding Director, International Institute for Sustainable Finance*

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The year that ends with this Annual Review has been the year in which the architecture of sustainable capital stopped being an aspiration and became a working apparatus. The indicators of this transition are not rhetorical. Eighty carbon pricing instruments are now in operation worldwide, covering twenty-eight per cent of global greenhouse gas emissions. Global climate finance crossed two trillion United States dollars in 2024, an all-time high. The Paris Agreement Crediting Mechanism issued its first methodology in October 2025. The Belém Package of November 2025 set out a set of decisions that, while uneven in ambition, establish the operating parameters for the remainder of the decade. And in India, the Carbon Credit Trading Scheme has entered compliance operation for approximately 490 obligated entities, with the Indian Carbon Market Portal launched on 21 March 2026.<sup>12345</sup>

This Annual Review is the flagship publication of the Sustainable Capital Research Foundation. It has two purposes. The first is to serve as a reference document for practitioners in India and beyond who need a rigorous synthesis of what has happened in the sustainable capital system during the fiscal year, drawing on primary sources and on the peer-reviewed literature. The second is to advance a structural reading of the year: not to narrate events in sequence, but to identify the institutional shifts that have occurred beneath them, and to evaluate whether those shifts are adequate to the scale of the task.

The review arrives at a particular moment in the Indian policy cycle. The Energy Conservation Amendment Act of 2022 is now being operationalised through the Ministry of Power’s methodological notifications, the Bureau of Energy Efficiency’s compliance procedures, and the Indian Carbon Market Portal. The Securities and Exchange Board of India’s Business Responsibility and Sustainability Reporting framework has moved from aspiration to assurance. The Reserve Bank of India’s green deposits framework and its draft climate risk disclosure rules for banks are entering the implementation phase. These are not isolated instruments. They constitute, taken together, the skeleton of a domestic sustainable finance regulatory architecture

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<sup>1</sup>World Bank, *State and Trends of Carbon Pricing 2025* (Washington, DC: World Bank, June 2025).

<sup>2</sup>Climate Policy Initiative, *Global Landscape of Climate Finance 2025* (San Francisco, June 2025).

<sup>3</sup>Article 6.4 Supervisory Body, Approval of AMMO01 – Afforestation, Reforestation, and Revegetation Methodology (October 2025), the first approved methodology under the Paris Agreement Crediting Mechanism.

<sup>4</sup>UNFCCC, *Belém Political Package* (Decisions of the Thirtieth Conference of the Parties, 22 November 2025).

Twenty-nine decisions adopted by consensus, including the Mutirão cover decision, a just transition mechanism, and a call to triple adaptation finance by 2035.

<sup>5</sup>International Carbon Action Partnership, “Compliance obligations under India’s Carbon Credit Trading Scheme enter into force for seven sectors”, 28 January 2026. Approximately 490 obligated entities, with first trading expected by mid-2026.

that will define the conditions under which Indian capital is allocated, disclosed, and priced for climate risk over the next decade.<sup>678</sup>

The Foundation’s own research programme has, during the year under review, produced two working papers that this Annual Review draws on. The first, Working Paper 2025-11-001, examined Article 6 implementation and the strategic choices facing emerging markets as they navigate cooperative approaches and the Paris Agreement Crediting Mechanism. The second, Working Paper 2026-03-004, conducted an integrity assessment of Indian voluntary carbon credits against the criteria of additionality, permanence, and co-benefits. Both papers argued that the defining question in sustainable capital is not whether markets will scale but whether the instruments that scale them will carry the integrity required to produce real mitigation.<sup>910</sup>

The argument the reader will encounter throughout this volume is straightforward. Sustainable capital is moving from a regime of voluntary commitment to a regime of regulated infrastructure. The transition is uneven, incomplete, and contested. It is also, in terms of institutional depth and financial consequence, the most significant shift in the capital allocation architecture of the present decade. For India, for emerging economies more broadly, and for the Foundation’s partners across the Global South, the question is not whether to participate in this transition but on what terms, and with what safeguards against the integrity failures that have compromised its predecessors. That question is the subject of this volume.

## **Shaurya Ritwik**

*Founding Director*

*International Institute for Sustainable Finance*

New Delhi, April 2026

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<sup>6</sup>Government of India, Energy Conservation (Amendment) Act, 2022, Act No. 19 of 2022, as amended by the Energy Conservation Rules (Carbon Credit Trading Scheme), 2023.

<sup>7</sup>Securities and Exchange Board of India, Business Responsibility and Sustainability Reporting (BRSR) framework. Top 1,000 listed entities by market capitalisation mandated to disclose since FY2022–23; BRSR Core introduced assurance requirements from FY2023–24.

<sup>8</sup>Reserve Bank of India, Framework for Acceptance of Green Deposits (June 2023) and Draft Disclosure Framework on Climate-related Financial Risks (February 2024).

<sup>9</sup>S. Ritwik and S. K. Pandey, *Article 6 Implementation: Lessons for Emerging Markets* (SCRF Working Paper No. SCRF-WP-2025-11-001, November 2025).

<sup>10</sup>S. Ritwik, *Carbon Credit Quality in India’s Voluntary Market: An Integrity Assessment* (SCRF Working Paper No. SCRF-WP-2026-03-004, March 2026).

## EXECUTIVE SUMMARY

*Ten findings that define the year in sustainable capital*

### ***Finding 1. Carbon pricing has become mainstream infrastructure.***

Eighty carbon pricing instruments are now in operation globally, covering approximately twenty-eight per cent of world greenhouse gas emissions, up from twenty-four per cent in 2024. Jurisdictions representing two-thirds of global gross domestic product have adopted carbon taxes or emissions trading systems. Revenues from carbon pricing exceeded one hundred billion United States dollars for the second consecutive year in 2024.<sup>11</sup>

### ***Finding 2. Compliance demand has tripled; voluntary demand has stalled.***

The 2025 World Bank State and Trends of Carbon Pricing report documented a threefold year-on-year increase in compliance-driven demand for carbon credits, while voluntary market growth was negligible. This asymmetry is reshaping the market structure and the premium attached to Core Carbon Principles labelled credits.<sup>1213</sup>

### ***Finding 3. Global climate finance flows crossed two trillion dollars in 2024.***

Climate Policy Initiative data indicate that global climate finance hit an all-time high of USD 1.9 trillion in 2023 and exceeded USD 2 trillion in 2024 on preliminary estimates. Private climate finance contributions crossed USD 1 trillion for the first time in 2023. Yet flows to emerging and developing economies other than China remained concentrated, reaching USD 196 billion.<sup>1415</sup>

### ***Finding 4. The adaptation finance gap has widened in absolute terms.***

Adaptation finance reached approximately USD 65 billion in 2023 against annual needs estimated by the United Nations Environment Programme at around USD 310 billion by 2035. The Belém

<sup>11</sup>World Bank, *State and Trends of Carbon Pricing 2025* (Washington, DC: World Bank, June 2025).

<sup>12</sup>World Bank, *State and Trends of Carbon Pricing 2025* (Washington, DC: World Bank, June 2025).

<sup>13</sup>MSCI, *Carbon Markets 2025 Year in Review* (January 2026). Voluntary issuance fell 13 per cent to 276 million tonnes in 2024 while retirements reached 202 million tonnes.

<sup>14</sup>Climate Policy Initiative, *Global Landscape of Climate Finance 2025* (San Francisco, June 2025).

<sup>15</sup>Climate Policy Initiative, *Global Landscape of Climate Finance 2025: EMDE Spotlight* (October 2025).

International climate finance to emerging and developing economies reached USD 196 billion in 2023, with 78 per cent from public actors.

Package of November 2025 called on developed countries to triple adaptation finance by 2035, a political signal without a binding target.<sup>1617</sup>

***Finding 5. Article 6 has moved from rulemaking to operation.***

The Article 6.4 Supervisory Body adopted its Standard on Methodology Requirements on 9 October 2024 and approved its first methodology, AMMO01 on afforestation, reforestation, and revegetation, in October 2025. Several sovereign transfers of Internationally Transferred Mitigation Outcomes under Article 6.2 have now been completed, including the Switzerland–Ghana ITMO transfer of July 2025.<sup>1819</sup>

***Finding 6. The EU Carbon Border Adjustment Mechanism enters its definitive phase.***

Regulation (EU) 2025/2083, adopted in October 2025, amended the CBAM framework introduced by Regulation (EU) 2023/956. Authorised CBAM Declarants must register by 31 March 2026. The United Kingdom CBAM will launch in 2027. Indian exporters of steel, aluminium, cement, and fertilisers are the principal affected constituency among emerging economies.<sup>202122</sup>

***Finding 7. India’s domestic carbon market entered compliance operation.***

As of fiscal year 2025–26, compliance obligations under India’s Carbon Credit Trading Scheme are in force for approximately 490 obligated entities across seven energy-intensive sectors. Greenhouse Gas Emission Intensity targets were notified in two phases: October 2025 for aluminium, cement, chlor-alkali, and pulp and paper (282 entities), and January 2026 for

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<sup>16</sup>Climate Policy Initiative, *Global Landscape of Climate Finance 2025* (San Francisco, June 2025).

<sup>17</sup>UNFCCC, *Belém Political Package* (Decisions of the Thirtieth Conference of the Parties, 22 November 2025).

Twenty-nine decisions adopted by consensus, including the Mutirão cover decision, a just transition mechanism, and a call to triple adaptation finance by 2035.

<sup>18</sup>UNFCCC, Decision 5/CMA.6, *Guidance on Cooperative Approaches Referred to in Article 6, Paragraph 2* (Baku, November 2024); Article 6.4 Supervisory Body Standard on Methodology Requirements, adopted 9 October 2024.

<sup>19</sup>Article 6.4 Supervisory Body, Approval of AMMO01 – Afforestation, Reforestation, and Revegetation Methodology (October 2025), the first approved methodology under the Paris Agreement Crediting Mechanism.

<sup>20</sup>Regulation (EU) 2025/2083 of the European Parliament and of the Council (amending Regulation (EU) 2023/956 establishing the Carbon Border Adjustment Mechanism), adopted October 2025.

<sup>21</sup>HM Treasury, United Kingdom, “UK Carbon Border Adjustment Mechanism: Design and Implementation” (Consultation Response, 2025). Launch confirmed for 2027.

<sup>22</sup>Authorised CBAM Declarants are required to register by 31 March 2026; a 50-tonne annual threshold applies for iron and steel, aluminium, fertilisers, and cement. Electricity and hydrogen remain included without the threshold.

petroleum refining, petrochemicals, textiles, and secondary aluminium (208 additional entities). Trading is expected to commence by mid-2026.<sup>232425</sup>

***Finding 8. The Indian Carbon Market Portal was launched on 21 March 2026.***

The Ministry of Power launched the Indian Carbon Market Portal, providing unified infrastructure for registration, monitoring, reporting, verification, and issuance of Carbon Credit Certificates. Eight offset methodologies had been approved in March 2025, covering green hydrogen, renewable energy distribution, biogas, afforestation, and selected waste management activities.<sup>2627</sup>

***Finding 9. Integrity, not volume, now determines credit value.***

The ICVCM decision of August 2024 to exclude eight renewable energy methodologies covering approximately 236 million unretired credits from Core Carbon Principles labelling redefined the market in 2025. Core Carbon Principles labelled credits traded at an approximate twenty-five per cent premium. Peer-reviewed evidence, including the Probst meta-analysis in *Nature Communications* and the Gill-Wiehl study in *Nature Sustainability*, confirms that the integrity problem has been material.<sup>28293031</sup>

***Finding 10. Sustainable debt issuance has crossed one trillion dollars for the fifth consecutive year.***

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<sup>23</sup>International Carbon Action Partnership, “Compliance obligations under India’s Carbon Credit Trading Scheme enter into force for seven sectors”, 28 January 2026. Approximately 490 obligated entities, with first trading expected by mid-2026.

<sup>24</sup>Ministry of Environment, Forest and Climate Change, Government of India, Gazette Notification on Greenhouse Gas Emission Intensity Targets for Aluminium, Cement, Chlor-Alkali, and Pulp and Paper sectors (October 2025). 282 obligated entities in the initial cohort.

<sup>25</sup>Press Information Bureau, Government of India, “Government notifies Greenhouse Gas Emission Intensity targets for 208 more carbon-intensive industries”, Release ID 2217239 (13 January 2026).

<sup>26</sup>Ministry of Power, Government of India, “Launch of Indian Carbon Market Portal”, Press Release (21 March 2026). The portal integrates registration, monitoring, reporting, verification, and issuance functions for Carbon Credit Certificates.

<sup>27</sup>Ministry of Power, Government of India, “Approval of Eight Methodologies under the Offset Mechanism of the Carbon Credit Trading Scheme”, Gazette Notification (28 March 2025).

<sup>28</sup>Integrity Council for the Voluntary Carbon Market, “Carbon credits from current renewable energy methodologies will not receive high-integrity CCP label” (decision of 8 August 2024). Eight methodologies, approximately 236 million unretired credits, or 32 per cent of the voluntary carbon market.

<sup>29</sup>Forest Trends’ Ecosystem Marketplace, *State of the Voluntary Carbon Market 2025* (Washington, DC, 2025).

<sup>30</sup>B. S. Probst, M. Toetzke, A. Kontoleon, et al., “Systematic assessment of the achieved emission reductions of carbon crediting projects”, *Nature Communications* 15 (2024): 9562.

<sup>31</sup>A. Gill-Wiehl, D. M. Kammen and B. K. Haya, “Pervasive over-crediting from cookstove offset methodologies”, *Nature Sustainability* 7 (2024): 191–202.

Green, social, sustainability, and sustainability-linked bond issuance exceeded USD 1 trillion in 2024 for the fifth successive year. Climate finance for agrifood systems rose over three hundred per cent since 2019 to approximately USD 95 billion annually. Emerging market green bond issuance continued to scale, though from a low base.<sup>323334</sup>

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<sup>32</sup>Climate Finance Leadership Initiative, reporting that sustainable debt issuance surpassed USD 1 trillion in 2024 for the fifth consecutive year.

<sup>33</sup>World Economic Forum, “Why investors must hone in on sustainable finance in 2025” (September 2025). Climate finance for agrifood systems rose over 300 per cent since 2019, reaching USD 95 billion annually.

<sup>34</sup>International Finance Corporation, *Emerging Market Green Bonds Report 2024* (Washington, DC: IFC, 2025).

## METHODOLOGY AND SOURCES

*How this review is constructed*

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This Annual Review synthesises developments in the sustainable capital system during the Indian fiscal year 2025–26, which runs from 1 April 2025 to 31 March 2026. Its scope is deliberately broader than any single market segment. It covers compliance and voluntary carbon markets, climate and green finance flows, the multilateral climate regime under the Paris Agreement, and Indian domestic regulatory architecture.<sup>3536</sup>

Four source classes underpin the analysis. The first is primary documentary material: UNFCCC decision texts from the Belém Conference of the Parties of November 2025, Indian Gazette notifications, Ministry of Power press releases, Bureau of Energy Efficiency procedures, European Union regulatory instruments, and United States and United Kingdom government publications. The second is peer-reviewed academic literature published in journals of record, including Nature Communications, Nature Sustainability, Climate Policy, and the Annual Review of Environment and Resources. The third is the analytical output of established research institutions with established methodological rigour, including the World Bank, the Climate Policy Initiative, the International Energy Agency, the International Carbon Action Partnership, and MSCI. The fourth is the Foundation’s own working paper series, published during the year and cited where directly relevant.

Where figures are reported, the citation points to the authoritative primary source. Where a figure is provisional or contested, the text flags the qualification. Where empirical findings are drawn from peer-reviewed meta-analyses, the relevant study is cited with its publication venue and date. The Annual Review does not repeat the full methodological exposition of its source documents; readers seeking the underlying methodology should consult the cited primary source.

The Annual Review is an institutional product of the Sustainable Capital Research Foundation. It is edited by the Founding Director of the International Institute for Sustainable Finance and produced by the Foundation’s research team. All interpretive framings, including the policy recommendations advanced in Part VI, are the responsibility of the Foundation and are not imputed to any of the sources cited.

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<sup>35</sup>The fiscal year in India runs from 1 April to 31 March. Fiscal year 2025–26 covers 1 April 2025 to 31 March 2026.

<sup>36</sup>This Annual Review draws on the research programme of the Sustainable Capital Research Foundation. It synthesises the Foundation’s published working papers alongside primary data from UNFCCC decision texts, central bank publications, Indian gazette notifications, and the peer-reviewed empirical literature on carbon market integrity.

## PART I

# The State of Global Carbon Markets

## 1.1 Compliance markets: expansion and maturation

Compliance carbon markets expanded materially during the year under review. The World Bank’s 2025 State and Trends of Carbon Pricing report recorded eighty instruments in operation, a net increase of five from the previous year. Coverage of global greenhouse gas emissions rose from twenty-four to twenty-eight per cent. All large middle-income economies have now either implemented direct carbon pricing or are actively developing instruments. Jurisdictions representing two-thirds of global gross domestic product have some form of carbon pricing in place.<sup>37</sup>

The expansion was driven in substantial measure by the inclusion of steel, cement, and aluminium sectors in the Chinese national emissions trading system, which added approximately three billion tonnes of carbon dioxide equivalent to regulated coverage. The European Union Emissions Trading System continued its maturation, with the 2023 extension to maritime transport remaining in force and the Carbon Border Adjustment Mechanism entering its definitive regulatory phase in October 2025. The United Kingdom Emissions Trading System retained its core design while the government confirmed that a domestic Carbon Border Adjustment Mechanism would launch in 2027. India’s Carbon Credit Trading Scheme entered its first compliance period, with implications examined in Part IV of this Review.<sup>38394041</sup>

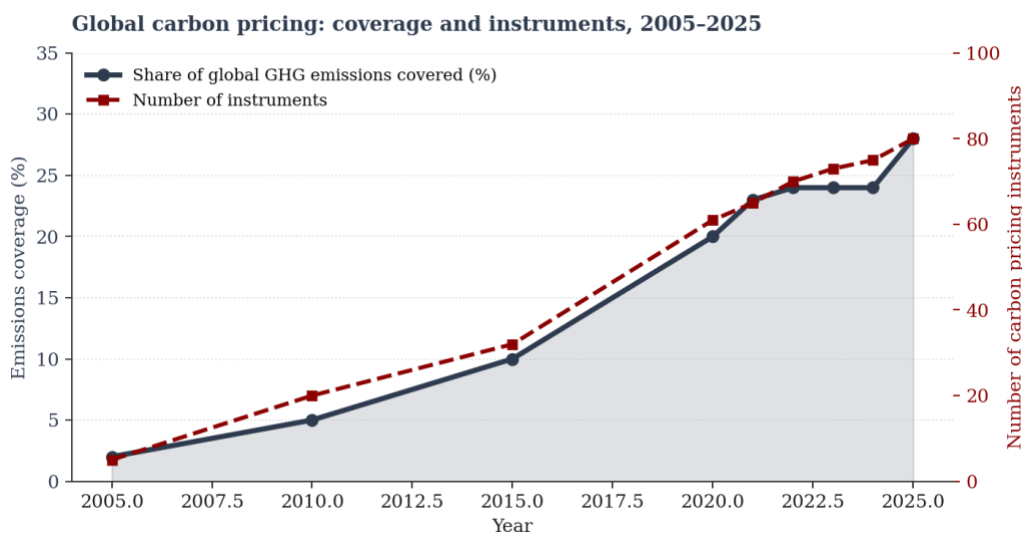
<sup>37</sup>World Bank, *State and Trends of Carbon Pricing 2025* (Washington, DC: World Bank, June 2025).

<sup>38</sup>Ministry of Ecology and Environment, People’s Republic of China, expansion of the national emissions trading system to steel, cement, and aluminium sectors (announced 2024, operationalised 2025). Approximately 3 billion additional tonnes of CO<sub>2</sub>-equivalent brought under regulation.

<sup>39</sup>European Commission, Directive (EU) 2023/959 amending Directive 2003/87/EC. The extension of EU ETS to maritime transport took effect on 1 January 2024, covering approximately 90 million tonnes of CO<sub>2</sub> annually.

<sup>40</sup>Regulation (EU) 2025/2083 of the European Parliament and of the Council (amending Regulation (EU) 2023/956 establishing the Carbon Border Adjustment Mechanism), adopted October 2025.

<sup>41</sup>HM Treasury, United Kingdom, “UK Carbon Border Adjustment Mechanism: Design and Implementation” (Consultation Response, 2025). Launch confirmed for 2027.



**Figure 1.1.** Carbon pricing coverage rose from two per cent in 2005 to twenty-eight per cent in 2025; eighty instruments were in operation at year end. Source: World Bank, *State and Trends of Carbon Pricing 2025*.

Revenue performance has been striking. Global carbon pricing revenues exceeded one hundred billion United States dollars in 2024, the second consecutive year at this level. Over half of the generated revenue was earmarked by governments for environment, infrastructure, and development projects, a slight increase on prior years. The fiscal function of carbon pricing, complementing its price-signalling and mitigation functions, has moved from rhetorical endorsement to fiscal fact in a growing number of jurisdictions.<sup>42</sup>

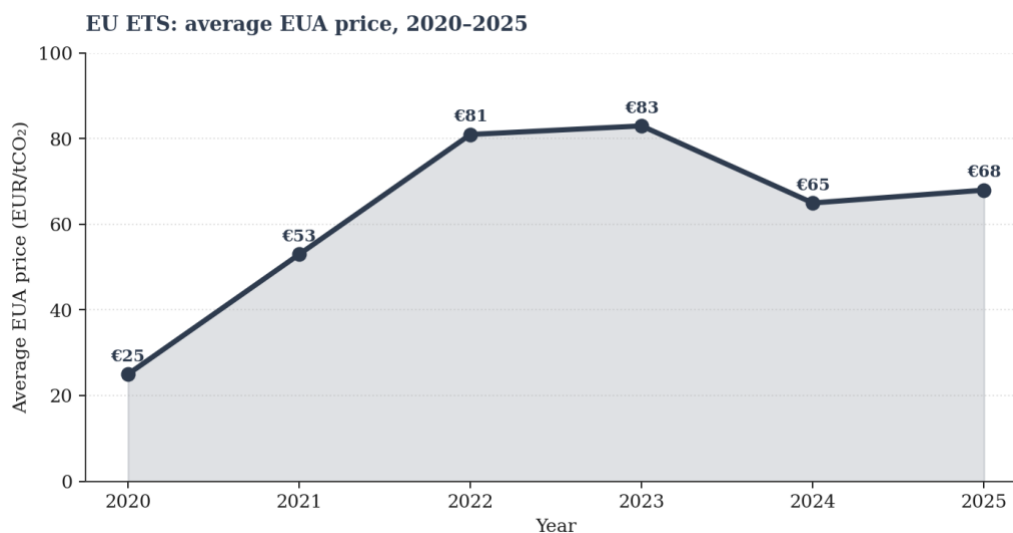
### **Price dynamics under the EU ETS**

Prices in the EU Emissions Trading System softened during 2024. The annual average European Union Allowance price fell by approximately twenty-two per cent to approximately sixty-five euros per tonne of carbon dioxide equivalent, reflecting weak industrial demand and abundant allowance supply. The European Securities and Markets Authority’s *EU Carbon Markets 2025* report characterised the price path as reflecting fundamentals rather than market failure, noting that the system has nonetheless achieved an approximately fifty per cent reduction in covered emissions since 2005.<sup>43,44</sup>

<sup>42</sup>World Bank, *State and Trends of Carbon Pricing 2025* (Washington, DC: World Bank, June 2025).

<sup>43</sup>European Securities and Markets Authority, *EU Carbon Markets 2025* (Paris, 2025). Average 2024 EUA price EUR 65 per tonne, a decline of approximately 22 per cent year on year.

<sup>44</sup>European Commission, *Report on the Functioning of the European Carbon Market in 2024* (Brussels, 2025). EU ETS emissions reduced by approximately 50 per cent since 2005.



**Figure 1.2.** Average EUA prices fell from a peak above eighty euros in 2022 to sixty-five euros in 2024, recovering modestly in 2025. Source: ESMA (2025); European Commission Report on the Functioning of the Carbon Market.

The Chinese national emissions trading system, by contrast, continued to develop. The 2025 sectoral expansion to steel, cement, and aluminium brought approximately three billion additional tonnes of carbon dioxide equivalent under the regulation, bringing total coverage to approximately sixty per cent of Chinese emissions. Price discovery remains constrained by relatively permissive allowance allocation and limited trading of cash-settled allowance products, though the directional trajectory is one of deepening market infrastructure.<sup>45</sup>

### ***International aviation and maritime***

The Carbon Offsetting and Reduction Scheme for International Aviation entered its First Phase, covering emissions from 2024 to 2026. Participating airlines were required to surrender eligible emissions units against offsetting obligations arising from international flight emissions above the sector's 2019 baseline. The integration of maritime transport into the EU Emissions Trading System, in force from 1 January 2024, covered approximately ninety million tonnes of carbon dioxide annually and created the first meaningful carbon price exposure for the global shipping industry.<sup>46,47</sup>

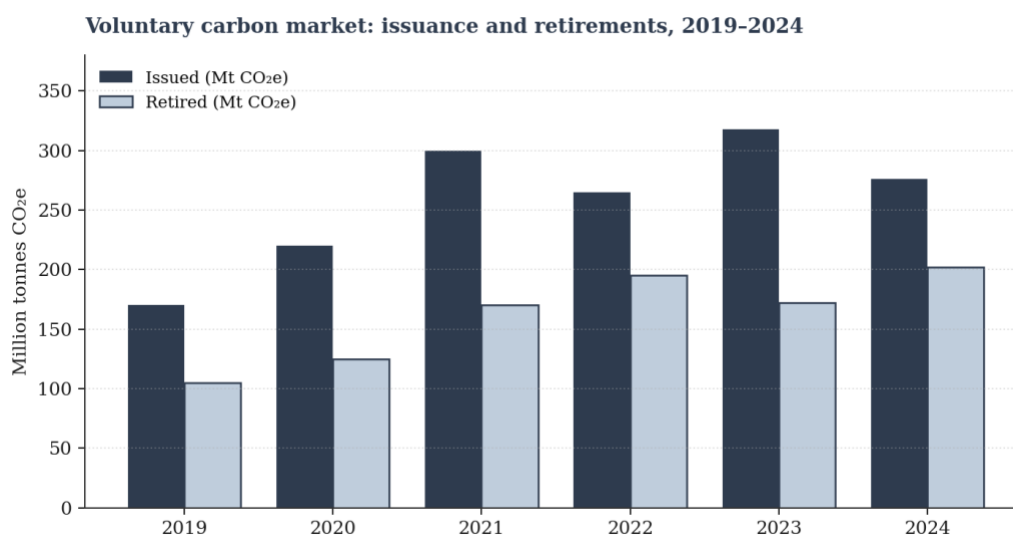
<sup>45</sup>Ministry of Ecology and Environment, People's Republic of China, expansion of the national emissions trading system to steel, cement, and aluminium sectors (announced 2024, operationalised 2025). Approximately 3 billion additional tonnes of CO<sub>2</sub>-equivalent brought under regulation.

<sup>46</sup>International Civil Aviation Organization, Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) First Phase, 2024–2026.

<sup>47</sup>European Commission, Directive (EU) 2023/959 amending Directive 2003/87/EC. The extension of EU ETS to maritime transport took effect on 1 January 2024, covering approximately 90 million tonnes of CO<sub>2</sub> annually.

## 1.2 Voluntary markets: contraction and quality re-pricing

The voluntary carbon market experienced contraction in transaction value during 2024 alongside a sharp increase in market segmentation by credit quality. MSCI data recorded issuance of 276 million tonnes of carbon dioxide equivalent in 2024, a decline of thirteen per cent from the prior year, set against record retirements of 202 million tonnes. The gap between issuance and retirement has narrowed sharply over the past five years. The global stock of unretired voluntary credits stood at approximately one billion tonnes at year end, according to World Bank data.<sup>48,49</sup>



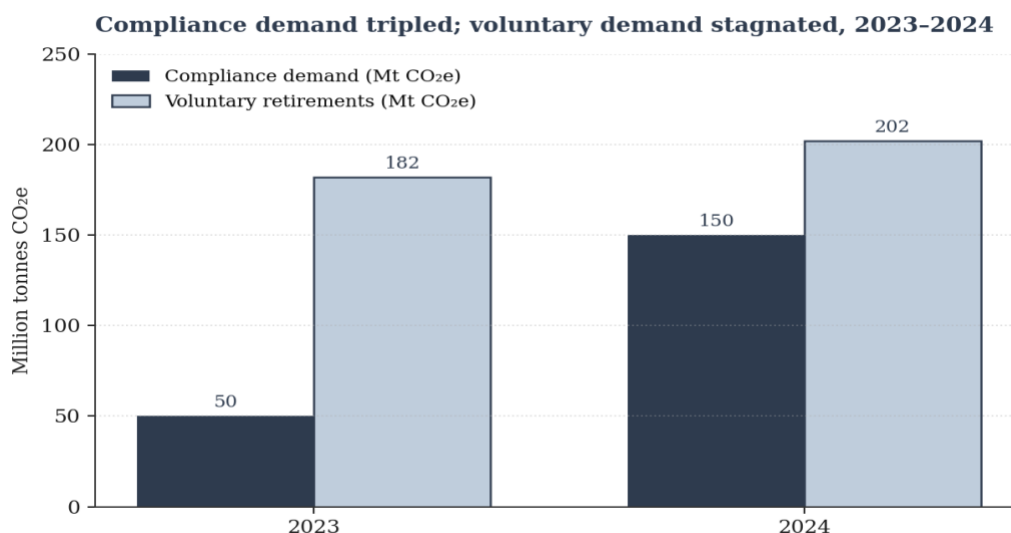
**Figure 1.3.** Voluntary issuance fell to 276 million tonnes in 2024 while retirements reached a record 202 million tonnes. Source: MSCI Carbon Markets 2025 Year in Review.

The headline contraction obscures a more consequential structural shift. The Integrity Council for the Voluntary Carbon Market’s decision of 8 August 2024 determined that eight renewable energy methodologies, covering approximately 236 million unretired credits or thirty-two per cent of the voluntary market, did not meet the additionality threshold of the Core Carbon Principles. The decision excluded credits under these methodologies from Core Carbon Principles labelling. Buyers responded with a flight to quality. Core Carbon Principles labelled credits traded at

<sup>48</sup>MSCI, *Carbon Markets 2025 Year in Review* (January 2026). Voluntary issuance fell 13 per cent to 276 million tonnes in 2024 while retirements reached 202 million tonnes.

<sup>49</sup>World Bank, *State and Trends of Carbon Pricing 2025* (Washington, DC: World Bank, June 2025).

approximately a twenty-five per cent premium during 2024 according to Ecosystem Marketplace data; non-labelled legacy credits faced discount or outright exclusion from premium demand.<sup>5051</sup>



**Figure 1.4.** Compliance demand for carbon credits tripled year on year; voluntary growth was negligible. Source: World Bank, *State and Trends of Carbon Pricing 2025*.

Empirical support for the Integrity Council’s caution came from two peer-reviewed studies published in late 2023 and 2024. The Probst and colleagues meta-analysis in *Nature Communications* synthesised fourteen studies covering 2,346 carbon mitigation projects, almost one billion tonnes of issued credits, and estimated that fewer than sixteen per cent of credits constituted real emission reductions. The Gill-Wiehl, Kammen, and Haya study in *Nature Sustainability*, focusing on cookstove offset methodologies, found over-crediting by a factor of approximately ten across the five methodologies assessed. These findings, systematised in the *Annual Review of Environment and Resources* by Romm and colleagues in 2025, have moved from academic observation to market pricing signal.<sup>5253</sup>

<sup>50</sup>Integrity Council for the Voluntary Carbon Market, “Carbon credits from current renewable energy methodologies will not receive high-integrity CCP label” (decision of 8 August 2024). Eight methodologies, approximately 236 million unretired credits, or 32 per cent of the voluntary carbon market.

<sup>51</sup>Forest Trends’ Ecosystem Marketplace, *State of the Voluntary Carbon Market 2025* (Washington, DC, 2025).

<sup>52</sup>B. S. Probst, M. Toetzke, A. Kontoleon, et al., “Systematic assessment of the achieved emission reductions of carbon crediting projects”, *Nature Communications* 15 (2024): 9562.

<sup>53</sup>A. Gill-Wiehl, D. M. Kammen and B. K. Haya, “Pervasive over-crediting from cookstove offset methodologies”, *Nature Sustainability* 7 (2024): 191–202.

## 1.3 Article 6 operationalisation

Article 6 of the Paris Agreement moved from rulemaking to operation during the year under review. The Article 6.4 Supervisory Body adopted its Standard on Methodology Requirements on 9 October 2024, establishing the central integrity discipline of the Paris Agreement Crediting Mechanism. The first methodology under the mechanism, AMM001 on afforestation, reforestation, and revegetation, was approved in October 2025. Several sovereign transfers of Internationally Transferred Mitigation Outcomes under Article 6.2 have been completed during the year, including the Switzerland–Ghana transfer executed in July 2025.<sup>5455</sup>

The Belém Conference of the Parties in November 2025 adopted the Belém Package, comprising twenty-nine decisions. The package did not introduce fundamental changes to the Article 6 rulebook, which remained substantially as settled at the Baku Conference of 2024. Its principal contribution to cooperative approaches was procedural consolidation: the adoption of reporting templates, the refinement of the review procedures for initial reports and information on Internationally Transferred Mitigation Outcomes, and the institutional continuity decisions required for the Article 6.4 Supervisory Body and the Article 6.8 work programme to function through the 2026–2028 period.<sup>5657</sup>

The Foundation’s Working Paper 2025-11-001 examined the strategic choices facing emerging markets as they navigate Article 6. Three cases were analysed: Ghana, which prioritised early institutional build-out and bilateral agreements and has now completed actual transfers; India, which has prioritised the construction of a domestic compliance market before full engagement with international instruments; and Indonesia, which has experimented with a voluntary exchange and restrictive export rules and is in the process of overhauling its framework. The paper’s central argument is that the quality of a host country’s Article 6 participation will be determined less by the volume of credits authorised for transfer than by the robustness of its Nationally Determined Contribution accounting and the statutory basis for corresponding adjustments.<sup>58</sup>

<sup>54</sup>UNFCCC, Decision 5/CMA.6, *Guidance on Cooperative Approaches Referred to in Article 6, Paragraph 2* (Baku, November 2024); Article 6.4 Supervisory Body Standard on Methodology Requirements, adopted 9 October 2024.

<sup>55</sup>Article 6.4 Supervisory Body, Approval of AMM001 – Afforestation, Reforestation, and Revegetation Methodology (October 2025), the first approved methodology under the Paris Agreement Crediting Mechanism.

<sup>56</sup>UNFCCC, *Belém Political Package* (Decisions of the Thirtieth Conference of the Parties, 22 November 2025).

Twenty-nine decisions adopted by consensus, including the Mutirão cover decision, a just transition mechanism, and a call to triple adaptation finance by 2035.

<sup>57</sup>UNFCCC, Decision 5/CMA.6, *Guidance on Cooperative Approaches Referred to in Article 6, Paragraph 2* (Baku, November 2024); Article 6.4 Supervisory Body Standard on Methodology Requirements, adopted 9 October 2024.

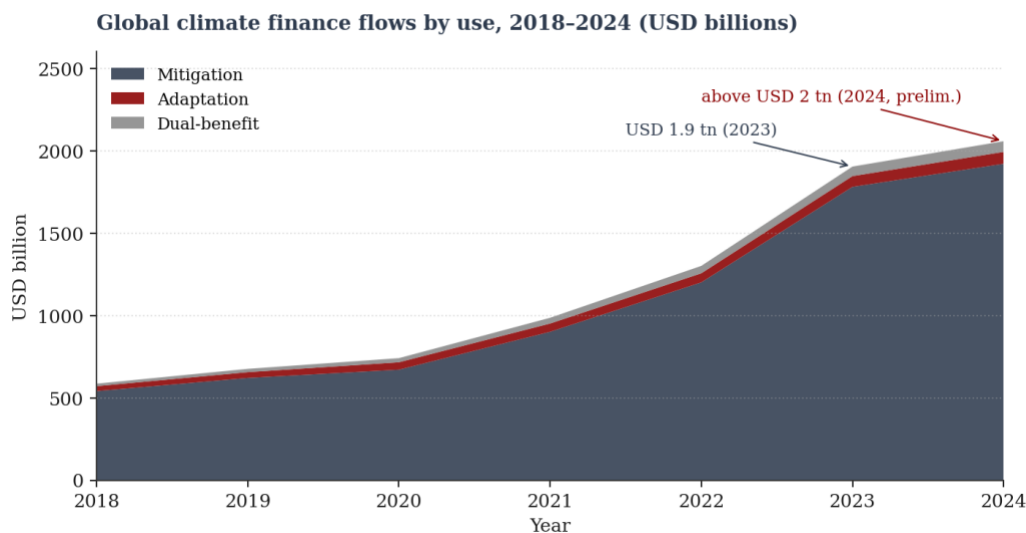
<sup>58</sup>S. Ritwik and S. K. Pandey, *Article 6 Implementation: Lessons for Emerging Markets* (SCRF Working Paper No. SCRF-WP-2025-11-001, November 2025).

PART II

# Global Climate and Green Finance Trends

## 2.1 Climate finance flows reach new peaks

Global climate finance reached an all-time high of approximately 1.9 trillion United States dollars in 2023, according to the Climate Policy Initiative’s 2025 Global Landscape of Climate Finance. Preliminary data for 2024 indicate that flows exceeded two trillion dollars for the first time. The growth trajectory strengthened materially after 2020, with annual investment rising on average by twenty-six per cent between 2021 and 2023 against eight per cent in the prior period.<sup>59</sup>



**Figure 2.1.** Global climate finance doubled between 2018 and 2023, exceeding two trillion dollars in 2024. Source: Climate Policy Initiative, *Global Landscape of Climate Finance 2025*.

Mitigation finance accounted for the substantial majority of flows, rising from USD 757 billion in 2018 to USD 1.78 trillion in 2023. The growth was driven by renewable energy investment in advanced economies and China, electrification of transport, and investment in energy-efficient buildings. Private climate finance crossed one trillion United States dollars for the first time in 2023, an increase of more than fifty per cent on 2022. Households emerged as the largest private

<sup>59</sup>Climate Policy Initiative, *Global Landscape of Climate Finance 2025* (San Francisco, June 2025).

contributor category, investing in electric vehicles, solar water heaters, and renewable-energy-powered heating, ventilation, and air conditioning systems.<sup>60</sup>

The distributional picture is, however, skewed. International climate finance to emerging and developing economies other than China reached USD 196 billion in 2023, with seventy-eight per cent from public actors. Against an estimated need of USD 8.6 trillion in annual climate finance from 2024 through 2050 to avoid the worst impacts of climate change, the gap remains materially large. The 2024 New Collective Quantified Goal established under the Paris Agreement at COP29 set a target of at least USD 300 billion per year in public climate finance by 2035, within a broader mobilisation goal of USD 1.3 trillion per year. The operationalisation of this goal through the Baku to Belém Roadmap was an important procedural development, though the gap between headline targets and delivered flows remains the defining characteristic of the multilateral climate finance architecture.<sup>616263</sup>

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<sup>60</sup>Climate Policy Initiative, *Global Landscape of Climate Finance 2025* (San Francisco, June 2025).

<sup>61</sup>Climate Policy Initiative, *Global Landscape of Climate Finance 2025: EMDE Spotlight* (October 2025).

International climate finance to emerging and developing economies reached USD 196 billion in 2023, with 78 per cent from public actors.

<sup>62</sup>UNFCCC, Decision 1/CMA.6 on the New Collective Quantified Goal, Baku (November 2024). Goal of at least USD 300 billion per year in public climate finance to developing countries by 2035, within a broader goal of USD 1.3 trillion per year.

<sup>63</sup>COP30 Presidency and COP29 Presidency, *Baku to Belém Roadmap to 1.3T* (2025). The roadmap operationalises the New Collective Quantified Goal on climate finance.

## 2.2 Sustainable debt and green bond markets

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Sustainable debt issuance, comprising green, social, sustainability, and sustainability-linked bonds and loans, exceeded one trillion United States dollars in 2024 for the fifth consecutive year. The market has moved beyond its early-growth phase into a maturation phase characterised by regulatory integration, taxonomy alignment, and investor scrutiny of use-of-proceeds reporting. The European Union Green Bond Standard, operational from December 2024, has created a voluntary but credentialing framework for issuance aligned with the EU Taxonomy.<sup>64</sup>

Emerging market green bond issuance continued to scale during 2024 and the first three quarters of 2025. The International Finance Corporation’s Emerging Market Green Bonds Report 2024 documented steady growth in issuance from Indian, Indonesian, Brazilian, and Vietnamese issuers, though from a base that remained small relative to the advanced economy market. India’s sovereign green bond programme, launched in January 2023, has been complemented by growing corporate green bond activity in the renewable energy, electric mobility, and green hydrogen segments. State Bank of India, Power Finance Corporation, and Rural Electrification Corporation have been the principal sovereign-linked issuers.<sup>65</sup>

Climate finance for agrifood systems rose by more than three hundred per cent from 2019 to reach approximately USD 95 billion annually. Blended finance vehicles have scaled materially across emerging markets, including Intesa Sanpaolo’s EUR 23 billion programme extending reduced-rate loans to agri-food supply chains in Italy, Aceli Africa’s USD 300 million mobilised across 3,500 loans reaching 1.5 million farmers, and the GrowBeyond USD 100 million blended vehicle supporting smallholder farmers across the Association of Southeast Asian Nations. Against an estimated need of USD 1.1 trillion annually for agrifood systems over the next five years, less than five per cent is being met today.<sup>66</sup>

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<sup>64</sup>Climate Finance Leadership Initiative, reporting that sustainable debt issuance surpassed USD 1 trillion in 2024 for the fifth consecutive year.

<sup>65</sup>International Finance Corporation, *Emerging Market Green Bonds Report 2024* (Washington, DC: IFC, 2025).

<sup>66</sup>World Economic Forum, “Why investors must hone in on sustainable finance in 2025” (September 2025). Climate finance for agrifood systems rose over 300 per cent since 2019, reaching USD 95 billion annually.

## 2.3 Adaptation finance: structural undersupply

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Adaptation finance reached approximately USD 65 billion in 2023, though Climate Policy Initiative notes that this figure is likely an underestimate due to tracking challenges for private adaptation flows. Dual-benefit finance, pursuing both adaptation and mitigation objectives, reached USD 58 billion. Set against the United Nations Environment Programme’s estimate of approximately USD 310 billion in annual adaptation finance needs for developing countries out to 2035, the shortfall is severe.<sup>67</sup>

The Belém Package of November 2025 called on developed countries to triple adaptation finance by 2035. The call was politically significant but procedurally soft: it is a call rather than a binding target, and is formally distinct from the New Collective Quantified Goal agreed at COP29. The Least Developed Countries group had proposed a tripling to USD 120 billion by 2030, which was not reflected in the final text. The Group of Least Developed Countries negotiator Aichetou Seck observed at the close of COP30 that the debate over figures continues to outpace the mobilisation of action.<sup>68,69</sup>

Adaptation finance also faces a structural mismatch in its institutional architecture. Public adaptation finance is concentrated in the multilateral development banks, the Green Climate Fund, the Adaptation Fund, and the Least Developed Countries Fund, with annual outflows of a magnitude that, even at peak approval years, falls materially short of needs. The Green Climate Fund’s approximately USD 3.3 billion of 2025 approvals, while representing a strong year for the fund, illustrates the scale of the mismatch. Private adaptation finance, though harder to track, remains a small fraction of private climate finance overall, reflecting the limited commercial return structures available for adaptation investments compared with mitigation investments in the renewable energy sector.<sup>70</sup>

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<sup>67</sup>Climate Policy Initiative, *Global Landscape of Climate Finance 2025* (San Francisco, June 2025).

<sup>68</sup>UNFCCC, *Belém Political Package* (Decisions of the Thirtieth Conference of the Parties, 22 November 2025).

Twenty-nine decisions adopted by consensus, including the Mutirão cover decision, a just transition mechanism, and a call to triple adaptation finance by 2035.

<sup>69</sup>UN Secretariat, closing remarks by UN Climate Change Executive Secretary Simon Stiell, COP30 (22 November 2025).

<sup>70</sup>Green Climate Fund, Board Meetings B.42 and B.43, approvals in 2025. Approximately USD 3.3 billion in approvals expected for 2025.

**PART III**

# **COP30 Belém: What It Changed**

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## **3.1 The Mutirão cover decision**

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The Thirtieth Conference of the Parties to the UNFCCC convened in Belém, Brazil, from 10 to 21 November 2025, with closing sessions extending into the early hours of 22 November. The final outcome, termed the Belém Political Package, comprises twenty-nine decisions adopted by consensus by 195 Parties. The cover decision, named Mutirão after the Portuguese term for collective effort, bundled four contentious negotiation tracks into a single consensus-based agreement. Seventeen additional decisions were adopted alongside it.<sup>71</sup>

The Mutirão decision reaffirmed that the global shift toward low-emission and climate-resilient development is, in the text’s language, irreversible, and that the Paris Agreement must go further and faster. It did not, despite considerable pressure from the Alliance of Small Island States and the Least Developed Countries, incorporate a binding reference to the phase-out of fossil fuels. The COP30 Presidency subsequently announced the creation of two Presidency-led roadmaps: one on transitioning away from fossil fuels in a just and equitable manner, and one on halting and reversing deforestation by 2030. These roadmaps are outside the formal decision text and their operational weight will depend on the 2026 intersessional process and the subsequent Presidency handover.<sup>72</sup>

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<sup>71</sup>UNFCCC, *Belém Political Package* (Decisions of the Thirtieth Conference of the Parties, 22 November 2025).

Twenty-nine decisions adopted by consensus, including the Mutirão cover decision, a just transition mechanism, and a call to triple adaptation finance by 2035.

<sup>72</sup>UNFCCC, *Belém Political Package* (Decisions of the Thirtieth Conference of the Parties, 22 November 2025).

Twenty-nine decisions adopted by consensus, including the Mutirão cover decision, a just transition mechanism, and a call to triple adaptation finance by 2035.

## 3.2 The just transition mechanism and adaptation finance

The Belém Package established a Just Transition Mechanism under Article 9 of the Paris Agreement, intended to enhance international cooperation, technical assistance, capacity-building, and knowledge-sharing on equitable and inclusive transitions. The mechanism’s design will be elaborated during the 2026 Bonn intersessional meetings, with operationalisation expected during the COP31 cycle. The United Nations University’s assessment identified the Just Transition Mechanism as one of the package’s five defining outcomes.<sup>73</sup>

On adaptation, the package adopted 59 voluntary indicators for the Global Goal on Adaptation, concluded the Baku Adaptation Roadmap for the 2026–2028 work programme, and called on developed countries to triple adaptation finance by 2035. These indicators, referred to as the Belém Adaptation Indicators, span water, food, health, ecosystems, infrastructure, and livelihoods, with cross-cutting coverage of finance, technology, and capacity-building. Their operational value depends on jurisdictional take-up, which will be tested over the subsequent year.<sup>74</sup>

The political significance of the tripling call exceeds its legal weight. It remains a call rather than a binding target; and, as noted in Part II, it is distinct from the New Collective Quantified Goal agreed at COP29. Negotiators from developed country groups, including the European Union and the Environmental Integrity Group, resisted the incorporation of a hard numerical target within the Belém decision on the ground that it would constitute a renegotiation of the NCQG rather than an implementation of it. The dispute over the relationship between the two targets will persist into the 2026 agenda.<sup>75/6</sup>

<sup>73</sup>UNFCCC, *Belém Political Package* (Decisions of the Thirtieth Conference of the Parties, 22 November 2025).

Twenty-nine decisions adopted by consensus, including the Mutirão cover decision, a just transition mechanism, and a call to triple adaptation finance by 2035.

<sup>74</sup>UNFCCC, *Belém Political Package* (Decisions of the Thirtieth Conference of the Parties, 22 November 2025).

Twenty-nine decisions adopted by consensus, including the Mutirão cover decision, a just transition mechanism, and a call to triple adaptation finance by 2035.

<sup>75</sup>UNFCCC, *Belém Political Package* (Decisions of the Thirtieth Conference of the Parties, 22 November 2025).

Twenty-nine decisions adopted by consensus, including the Mutirão cover decision, a just transition mechanism, and a call to triple adaptation finance by 2035.

<sup>76</sup>UNFCCC, Decision 1/CMA.6 on the New Collective Quantified Goal, Baku (November 2024). Goal of at least USD 300 billion per year in public climate finance to developing countries by 2035, within a broader goal of USD 1.3 trillion per year.

### 3.3 The Tropical Forests Forever Facility

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One of the most consequential announcements during the COP30 period was the launch of the Tropical Forests Forever Facility. The Facility is designed to provide long-term, predictable financing for countries that protect and sustainably manage tropical forests, addressing the recurring problem of the short-dated and project-specific nature of forest finance. The COP30 Presidency reported that fifty-three countries endorsed the launch declaration and that over USD 5.5 billion was announced around the launch. Brazil, as the host and principal designer of the Facility, committed substantial initial resources; additional commitments came from Norway, Germany, France, Indonesia, and Malaysia, among others.<sup>77</sup>

The Facility’s long-term viability will depend on the structuring of its financial instruments, the integrity of its monitoring and verification framework, and the integration of indigenous peoples’ and local communities’ rights into its operational design. For emerging economies with substantial tropical forest endowments, including India in the limited context of its Northeastern and Western Ghats forests, the Facility represents a new instrument for the financialisation of forest conservation. Its interaction with the voluntary REDD+ market under Verra’s VM0048 methodology and with jurisdictional programmes under the Architecture for REDD+ Transactions framework remains to be worked out.

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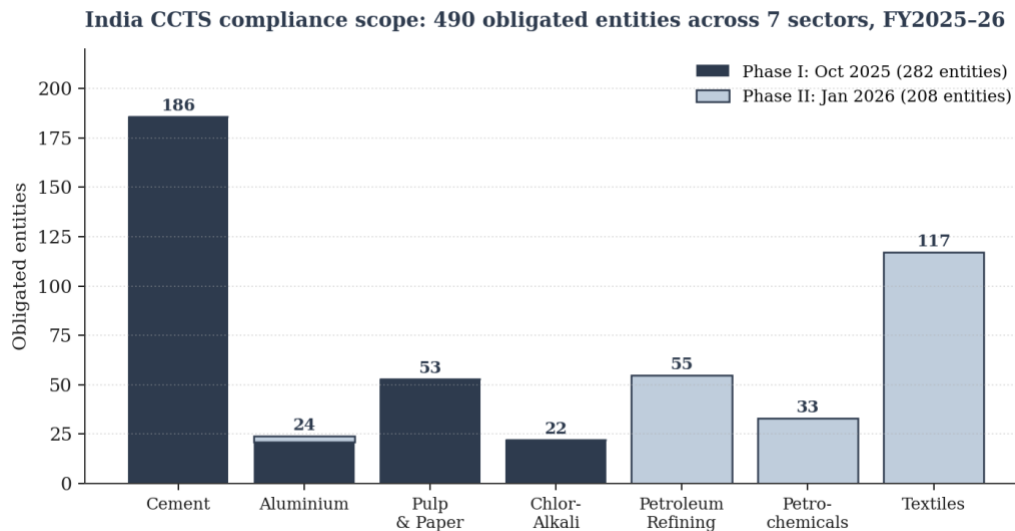
<sup>77</sup>Tropical Forests Forever Facility (TFFF), launched at COP30 Belém (November 2025). 53 countries endorsed the launch declaration; over USD 5.5 billion announced at launch.

**PART IV**

# India Policy Shifts

## 4.1 The Carbon Credit Trading Scheme enters compliance operation

Fiscal year 2025–26 marks the inflection point in the Indian carbon market. Compliance obligations under the Carbon Credit Trading Scheme, established by the Energy Conservation (Amendment) Act, 2022, entered into force for approximately 490 obligated entities across seven energy-intensive sectors. The greenhouse gas emission intensity targets were notified in two phases. The October 2025 notification covered 282 entities in aluminium, cement, chlor-alkali, and pulp and paper. The January 2026 notification expanded the scope to 208 additional entities in petroleum refining, petrochemicals, textiles, and secondary aluminium.<sup>78798081</sup>



<sup>78</sup>Government of India, Energy Conservation (Amendment) Act, 2022, Act No. 19 of 2022, as amended by the Energy Conservation Rules (Carbon Credit Trading Scheme), 2023.

<sup>79</sup>International Carbon Action Partnership, “Compliance obligations under India’s Carbon Credit Trading Scheme enter into force for seven sectors”, 28 January 2026. Approximately 490 obligated entities, with first trading expected by mid-2026.

<sup>80</sup>Ministry of Environment, Forest and Climate Change, Government of India, Gazette Notification on Greenhouse Gas Emission Intensity Targets for Aluminium, Cement, Chlor-Alkali, and Pulp and Paper sectors (October 2025). 282 obligated entities in the initial cohort.

<sup>81</sup>Press Information Bureau, Government of India, “Government notifies Greenhouse Gas Emission Intensity targets for 208 more carbon-intensive industries”, Release ID 2217239 (13 January 2026).

**Figure 4.1.** *The 490 obligated entities span seven sectors; cement, petroleum refining, and aluminium account for the largest shares of baseline emissions. Source: Ministry of Environment, Forest and Climate Change; Press Information Bureau notifications.*

The target structure is rate-based rather than cap-based. Entities are assigned greenhouse gas emission intensity targets expressed in tonnes of carbon dioxide equivalent per unit of output, differentiated at sub-sector level. Entities that outperform their assigned targets are eligible for the issuance of Carbon Credit Certificates. Entities that underperform must acquire and surrender an equivalent number of certificates. The rate-based design was a deliberate policy choice, reflecting the Indian position that a cap-based system could constrain industrial output growth in a manner inconsistent with the country’s development trajectory. The design parallels the Perform, Achieve, and Trade scheme administered by the Bureau of Energy Efficiency since 2012, which the CCTS is phased to replace for the covered sectors.<sup>82</sup>

Trading in Carbon Credit Certificates is expected to commence by mid-2026 through the existing power exchanges under the regulatory oversight of the Central Electricity Regulatory Commission. The registry is operated by the Grid Controller of India Limited on behalf of the Bureau of Energy Efficiency. Early price estimates circulated in industry analyses suggest a range of INR 600 to INR 900 per tonne of carbon dioxide equivalent in the initial trading period, though actual price discovery will depend on the stringency of sector-specific target calibration and the allocation of target tightening across compliance cycles.<sup>83</sup>

### ***Sectoral asymmetry in compliance burden***

Baseline emissions are highly concentrated. Cement accounts for the largest share of aggregate baseline emissions, followed by petroleum refining and aluminium. Although sectors such as textiles and pulp and paper encompass a larger number of entities, their contribution to total baseline emissions is relatively smaller. The implication, as noted in the Bureau of Energy Efficiency’s sectoral assessments, is that emission reduction effort will be concentrated in a small number of high-emitting sectors, which will face the greatest compliance pressure and the greatest requirement either to reduce emissions internally or to acquire certificates from over-performing peers.<sup>84</sup>

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<sup>82</sup>Bureau of Energy Efficiency, “Detailed Procedure for Compliance under the Carbon Credit Trading Scheme”, Version 1.0 (New Delhi, 2024). Monitoring, reporting and verification requirements follow IPCC 2006 Guidelines as updated.

<sup>83</sup>International Carbon Action Partnership, “Compliance obligations under India’s Carbon Credit Trading Scheme enter into force for seven sectors”, 28 January 2026. Approximately 490 obligated entities, with first trading expected by mid-2026.

<sup>84</sup>Bureau of Energy Efficiency, “Detailed Procedure for Compliance under the Carbon Credit Trading Scheme”, Version 1.0 (New Delhi, 2024). Monitoring, reporting and verification requirements follow IPCC 2006 Guidelines as updated.

## 4.2 The Indian Carbon Market Portal and offset methodologies

On 21 March 2026, Union Power Minister Manohar Lal launched the Indian Carbon Market Portal at the Prakriti conference in New Delhi. The portal provides unified infrastructure for registration, monitoring, reporting, verification, and issuance of Carbon Credit Certificates, covering both compliance entities and voluntary offset projects. It represents the final structural piece of the domestic market infrastructure. Formal trading is expected to commence within four months of the launch.<sup>85</sup>

The offset mechanism operates alongside the compliance mechanism. Its methodological scope was defined by the Ministry of Power’s notification of 28 March 2025, which approved eight methodologies for voluntary carbon credit generation. These covered green hydrogen, renewable energy distribution and demand-side management, biogas and bio-compressed natural gas, afforestation and ecosystem restoration, and selected waste management activities. The offset mechanism allows non-obligated entities to register projects and generate tradable certificates that can be purchased by compliance entities within the applicable limits on offset use.<sup>86</sup>

The integrity architecture of the offset mechanism remains incomplete. The Foundation’s Working Paper 2026-03-004 examined the integrity profile of the Indian voluntary carbon credit portfolio and argued for three design choices in the domestic offset mechanism: categorical exclusion of grid-connected renewable electricity projects from offset eligibility, consistent with the Integrity Council for the Voluntary Carbon Market’s August 2024 decision; restriction of cookstove eligibility to metered methodologies, consistent with the Berkeley empirical findings; and statutory codification of benefit-sharing obligations for forestry and land-use projects, modelled on the Kenyan Climate Change (Amendment) Act, 2023. The currently approved methodologies include categories adjacent to the concerns flagged in that paper, and the continued methodological refinement during 2026 and 2027 will be the principal site at which integrity concerns either are or are not resolved.<sup>87</sup>

<sup>85</sup>Ministry of Power, Government of India, “Launch of Indian Carbon Market Portal”, Press Release (21 March 2026). The portal integrates registration, monitoring, reporting, verification, and issuance functions for Carbon Credit Certificates.

<sup>86</sup>Ministry of Power, Government of India, “Approval of Eight Methodologies under the Offset Mechanism of the Carbon Credit Trading Scheme”, Gazette Notification (28 March 2025).

<sup>87</sup>S. Ritwik, *Carbon Credit Quality in India’s Voluntary Market: An Integrity Assessment* (SCRF Working Paper No. SCRF-WP-2026-03-004, March 2026).

### 4.3 CBAM exposure and industrial competitiveness

The European Union Carbon Border Adjustment Mechanism, as amended by Regulation (EU) 2025/2083 adopted in October 2025, exerts material pressure on Indian exporters in covered categories. Indian exports of iron and steel, aluminium, cement, and fertilisers to the European Union collectively total several billion United States dollars annually. Under CBAM, from 1 January 2026 onwards, importers into the European Union are required to purchase and surrender CBAM certificates reflecting the embedded emissions of their imported products, priced to the EU Emissions Trading System allowance price. Carbon price paid in the country of origin is deductible from the CBAM obligation.<sup>88</sup>

The United Kingdom has confirmed a parallel CBAM launching in 2027. The instrument design closely mirrors the EU mechanism. Together, these two regimes create a material carbon price exposure for Indian exporters of covered commodities, to be resolved either through domestic carbon pricing that offsets the CBAM obligation, through absorption of the cost in export margins, or through redirection of trade flows. The extension of Indian CCTS coverage to petroleum refining and petrochemicals in January 2026 may be understood, among other functions, as a positioning step in relation to CBAM.<sup>8990</sup>

A 50-tonne annual threshold applies under the amended CBAM regulation to imports of iron and steel, aluminium, fertilisers, and cement; electricity and hydrogen remain covered without the threshold. Importers above the threshold must register as Authorised CBAM Declarants by 31 March 2026. The threshold primarily exempts small importers, not exporters; its practical effect for Indian producers is marginal. The strategic question for Indian industry is whether to treat the domestic CCTS price as a partial offset against CBAM or to pursue bilateral recognition arrangements, an avenue that was not opened by the Belém Package but that the Indian government has signalled interest in pursuing through EU bilateral consultations.<sup>9192</sup>

<sup>88</sup>Regulation (EU) 2025/2083 of the European Parliament and of the Council (amending Regulation (EU) 2023/956 establishing the Carbon Border Adjustment Mechanism), adopted October 2025.

<sup>89</sup>HM Treasury, United Kingdom, “UK Carbon Border Adjustment Mechanism: Design and Implementation” (Consultation Response, 2025). Launch confirmed for 2027.

<sup>90</sup>Authorised CBAM Declarants are required to register by 31 March 2026; a 50-tonne annual threshold applies for iron and steel, aluminium, fertilisers, and cement. Electricity and hydrogen remain included without the threshold.

<sup>91</sup>Authorised CBAM Declarants are required to register by 31 March 2026; a 50-tonne annual threshold applies for iron and steel, aluminium, fertilisers, and cement. Electricity and hydrogen remain included without the threshold.

<sup>92</sup>Regulation (EU) 2025/2083 of the European Parliament and of the Council (amending Regulation (EU) 2023/956 establishing the Carbon Border Adjustment Mechanism), adopted October 2025.

## 4.4 Sustainable finance regulation: SEBI, RBI, and IFSCA

The Indian domestic sustainable finance regulatory architecture has moved through the year at pace. The Securities and Exchange Board of India’s Business Responsibility and Sustainability Reporting framework requires the top 1,000 listed entities by market capitalisation to make structured environmental, social, and governance disclosures. The BRSR Core, introduced for financial year 2023–24, imposes reasonable assurance on a defined subset of indicators, phased by market capitalisation. For fiscal year 2025–26, the top 150 listed entities are covered by the assurance requirement, rising to the top 500 entities by financial year 2026–27.<sup>93</sup>

The Reserve Bank of India has advanced a framework for the acceptance of green deposits, in force since 1 June 2023, and has issued a draft disclosure framework on climate-related financial risks for regulated entities, released for consultation in February 2024. The draft framework is expected to move to final issuance during 2026 and will impose disclosure requirements broadly aligned with IFRS S2 Climate-related Disclosures as developed by the International Sustainability Standards Board. The Reserve Bank’s Report on Trend and Progress of Banking in India for 2024–25, published in December 2025, documented material growth in green deposits across the banking sector, though from a small base relative to aggregate deposit volumes.<sup>94</sup><sup>95</sup>

The International Financial Services Centres Authority, operating the GIFT City jurisdiction, has established itself as the principal Indian gateway for international sustainable finance activity. Its regulatory framework for sustainability-linked financial products, carbon credit-related instruments, and transition finance bonds has developed through 2024 and 2025. GIFT City is now the preferred domicile for Indian issuers seeking to access international investor pools for sustainability-linked bonds and transition finance instruments, and it is increasingly the venue for carbon credit-linked financial products that would be legally complex to structure onshore.

<sup>93</sup>Securities and Exchange Board of India, Business Responsibility and Sustainability Reporting (BRSR) framework. Top 1,000 listed entities by market capitalisation mandated to disclose since FY2022–23; BRSR Core introduced assurance requirements from FY2023–24.

<sup>94</sup>Reserve Bank of India, Framework for Acceptance of Green Deposits (June 2023) and Draft Disclosure Framework on Climate-related Financial Risks (February 2024).

<sup>95</sup>International Sustainability Standards Board (ISSB), IFRS S2 Climate-related Disclosures, effective for annual reporting periods beginning on or after 1 January 2024, with jurisdiction-specific adoption timelines.

<sup>96</sup>Reserve Bank of India, *Report on Trend and Progress of Banking in India 2024-25* (Mumbai: RBI, December 2025).

## PART V

# Research Highlights from SCRF Fellows

*This Part summarises three streams of research conducted within the Sustainable Capital Research Foundation and its associated institution, the International Institute for Sustainable Finance, during fiscal year 2025–26. The first two streams have resulted in published working papers; the third is work in progress, with forthcoming publication in the Foundation’s series during the next review year. Full citations appear in the References section.*

## 5.1 Article 6 Implementation: Lessons for Emerging Markets

Working Paper SCRF-WP-2025-11-001, authored by Shaurya Ritwik and Subham Kumar Pandey and published in November 2025, examined the strategic choices facing emerging markets as they navigate Article 6 of the Paris Agreement. The paper applied a four-pillar analytical framework, covering institutional capacity, Nationally Determined Contribution coherence, corresponding adjustment accounting, and political economy, to three country cases: Ghana, India, and Indonesia.<sup>97</sup>

The paper’s central argument is that Article 6 has shifted, following the Baku decisions of 2024 and the first methodology approval of October 2025, from a rulemaking exercise into a period of practical implementation. For emerging markets, this transition presents an asymmetric opportunity: host countries possess low-cost mitigation potential, but participation requires institutional depth, accounting capacity, and political economy choices that many jurisdictions have not fully resolved. Ghana’s first actual ITMO transfer under its bilateral agreement with Switzerland in July 2025, mediated through the KliK Foundation, was the first operational test of cooperative approaches and provided the empirical foundation for one of the paper’s case studies.

The paper offered a distinction between three pathways available to emerging markets: early export of authorised mitigation outcomes under bilateral agreements; calibrated domestic primacy, in which the country constructs a domestic compliance market before engaging with Article 6 transfers; and regulatory iteration, in which the country experiments with multiple frameworks and updates them as evidence accumulates. India’s pathway is closest to the second, though the country retains the option to authorise transfers under Article 6.2 or 6.4 in future periods. The paper’s recommendations included the codification of corresponding adjustment accounting in domestic statute, the development of a national registry integrated with

<sup>97</sup>S. Ritwik and S. K. Pandey, *Article 6 Implementation: Lessons for Emerging Markets* (SCRF Working Paper No. SCRF-WP-2025-11-001, November 2025).

international registries, and the establishment of an independent reviewer function for Initial Reports under cooperative approaches.<sup>98</sup>

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<sup>98</sup>S. Ritwik and S. K. Pandey, *Article 6 Implementation: Lessons for Emerging Markets* (SCRF Working Paper No. SCRF-WP-2025-11-001, November 2025).

## 5.2 Carbon Credit Quality in India’s Voluntary Market

Working Paper SCRF-WP-2026-03-004, authored by Shaurya Ritwik and published in March 2026, conducted an integrity assessment of Indian voluntary carbon credits against the criteria of additionality, permanence, and co-benefits. The paper applied the framework to three methodology clusters that account for most Indian issuance: grid-connected renewable energy, improved and clean cookstoves, and forestry and land use.<sup>99</sup>

The findings were differentiated. Grid-connected renewable energy projects have substantially failed the additionality test under empirical scrutiny and under the formal assessment of the Integrity Council for the Voluntary Carbon Market. The Corporate Accountability analysis of 2025 identified nine Indian projects among the forty-seven largest problematic retirements of 2024, including named activities by Karcham Wangtoo, Green Infra Wind, Jaiprakash Power Ventures, the Adani Group, and JHPL. Cookstove projects under dominant methodologies were shown, through the Gill-Wiehl, Kammen, and Haya study, to overestimate emission reductions by approximately an order of magnitude. Forestry and land-use projects presented unresolved permanence concerns and a documented equity failure in benefit distribution, drawing on the Bhattacharya and colleagues peer-reviewed survey of 841 farmers across seven carbon farming project villages in Haryana and Madhya Pradesh.<sup>100101102</sup>

The paper’s policy recommendations have direct application to the domestic offset mechanism now operationalised through the Indian Carbon Market Portal. These included categorical exclusion of grid-connected renewables from offset eligibility, restriction of cookstove methodologies to metered monitoring approaches, statutory codification of benefit-sharing obligations for AFOLU projects modelled on the Kenyan Climate Change (Amendment) Act, 2023, pooled buffer reserves with extended monitoring periods for permanence management, and built-in procedures for independent review of project documentation. The paper concluded that the forward task for Indian policymakers is not retrospective remediation of existing voluntary

<sup>99</sup>S. Ritwik, *Carbon Credit Quality in India’s Voluntary Market: An Integrity Assessment* (SCRF Working Paper No. SCRF-WP-2026-03-004, March 2026).

<sup>100</sup>Integrity Council for the Voluntary Carbon Market, “Carbon credits from current renewable energy methodologies will not receive high-integrity CCP label” (decision of 8 August 2024). Eight methodologies, approximately 236 million unretired credits, or 32 per cent of the voluntary carbon market.

<sup>101</sup>B. S. Probst, M. Toetzke, A. Kontoleon, et al., “Systematic assessment of the achieved emission reductions of carbon crediting projects”, *Nature Communications* 15 (2024): 9562.

<sup>102</sup>A. Gill-Wiehl, D. M. Kammen and B. K. Haya, “Pervasive over-crediting from cookstove offset methodologies”, *Nature Sustainability* 7 (2024): 191–202.

market exposures but the prevention of integrity failures in the domestic architecture now under construction.<sup>103</sup>

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<sup>103</sup>S. Ritwik, *Carbon Credit Quality in India's Voluntary Market: An Integrity Assessment* (SCRF Working Paper No. SCRF-WP-2026-03-004, March 2026).

## 5.3 Sustainable Capital Architecture for the Global South

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The Foundation’s third research stream, in progress during the current fiscal year and slated for publication in the Foundation’s working paper series during 2026–27, examines the architecture of sustainable capital in the Global South. The stream is motivated by an empirical asymmetry: international climate finance flows to emerging and developing economies other than China reached USD 196 billion in 2023, a fraction of the volumes mobilised for advanced economy transitions, and dramatically below the estimated needs.<sup>104</sup>

The research stream has three working hypotheses. First, that the principal constraint on climate capital flows to the Global South is not a shortage of projects, but a shortage of institutional infrastructure to underwrite, disclose, and absorb risk at the scale and standardisation required by international institutional investors. Second, that multilateral development bank reform, while essential, cannot substitute for the construction of deep domestic capital markets in host economies; capital volumes required exceed the lending capacity of even a reformed MDB system. Third, that the operational integration of compliance carbon markets, sustainable debt markets, and blended finance structures is the principal design space for addressing the climate finance gap in the Global South.

The forthcoming paper will examine three comparative cases: the institutional architecture of Brazilian climate finance mobilisation; the role of Indonesia’s Just Energy Transition Partnership in shaping investable project pipelines; and the emerging role of GIFT City in the International Financial Services Centres Authority framework as a Global South sustainable capital hub. The paper will argue that the institutional architecture of sustainable capital in the Global South is the decisive determinant of whether the financial system can deliver the transition at scale, and that this architecture is being built in real time by a small number of Global South institutions whose work should inform the next phase of multilateral engagement.

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<sup>104</sup>Climate Policy Initiative, *Global Landscape of Climate Finance 2025: EMDE Spotlight* (October 2025).

International climate finance to emerging and developing economies reached USD 196 billion in 2023, with 78 per cent from public actors.

## PART VI

# Outlook 2026–27

## 6.1 Ten watchpoints for the year ahead

The analysis in Parts I through V identifies ten specific developments whose trajectory during fiscal year 2026–27 will shape the sustainable capital system. These are listed below in no particular order.

### ***1. The first CCTS trading cycle under compliance rules.***

Trading of Carbon Credit Certificates is expected to commence by mid-2026. The price discovery of the initial trading period, the calibration of sectoral target tightness across the first compliance cycle, and the integrity architecture of the parallel offset mechanism will determine whether the Indian domestic carbon market meets its institutional potential or repeats the errors of the voluntary market it partially displaces.<sup>105106</sup>

### ***2. The Paris Agreement Crediting Mechanism’s methodology pipeline.***

With AMM001 now approved, the Article 6.4 Supervisory Body’s methodology review pipeline is the principal determinant of the mechanism’s scalability. Methodologies covering renewable energy, waste management, fuel switching, and industrial processes are expected during 2026 and 2027. The stringency of the approved methodologies will set the integrity floor for the emerging compliance-grade international carbon market.<sup>107</sup>

### ***3. CBAM’s definitive phase.***

CBAM enters its definitive phase during 2026 with the registration deadline of 31 March 2026 for Authorised CBAM Declarants and the UK CBAM launch scheduled for 2027. The effective carbon

<sup>105</sup>International Carbon Action Partnership, “Compliance obligations under India’s Carbon Credit Trading Scheme enter into force for seven sectors”, 28 January 2026. Approximately 490 obligated entities, with first trading expected by mid-2026.

<sup>106</sup>Ministry of Power, Government of India, “Launch of Indian Carbon Market Portal”, Press Release (21 March 2026). The portal integrates registration, monitoring, reporting, verification, and issuance functions for Carbon Credit Certificates.

<sup>107</sup>Article 6.4 Supervisory Body, Approval of AMM001 – Afforestation, Reforestation, and Revegetation Methodology (October 2025), the first approved methodology under the Paris Agreement Crediting Mechanism.

price exposure for Indian exporters in covered sectors, and the potential for bilateral recognition of domestic CCTS prices, are the principal operational variables.<sup>108109</sup>

#### **4. The SEBI BRSR Core expansion to the top 500 listed entities.**

Financial year 2026–27 will expand the assurance requirement under BRSR Core from the top 150 to the top 500 listed entities. The assurance capacity of the Indian professional services ecosystem, the cost of compliance for mid-cap issuers, and the effect of scaled assurance on investor use of BRSR data are the principal monitoring questions.<sup>110</sup>

#### **5. The RBI climate disclosure framework.**

The Reserve Bank of India’s draft disclosure framework on climate-related financial risks is expected to move to final issuance during 2026. The final rules will determine the Indian banking sector’s climate risk disclosure trajectory over the subsequent five years.<sup>111</sup>

#### **6. The second round of NDC updates.**

The revised round of Nationally Determined Contributions submitted during 2025 and early 2026 cover approximately eighty per cent of global emissions, under the UNFCCC’s 2025 Synthesis Report assessment. The synthesis of these NDCs against the 1.5°C pathway, and the trajectory of ambition over the 2026–2028 implementation cycle, will be decisive for the feasibility of the Paris Agreement temperature goal.

#### **7. The Baku to Belém Roadmap operationalisation.**

The Roadmap’s operationalisation through the 2026–2028 work programme will test the political weight of the New Collective Quantified Goal and the tripling of adaptation finance. Public finance commitments to be announced during COP31 will be the first substantive test.<sup>112113</sup>

<sup>108</sup>Regulation (EU) 2025/2083 of the European Parliament and of the Council (amending Regulation (EU) 2023/956 establishing the Carbon Border Adjustment Mechanism), adopted October 2025.

<sup>109</sup>HM Treasury, United Kingdom, “UK Carbon Border Adjustment Mechanism: Design and Implementation” (Consultation Response, 2025). Launch confirmed for 2027.

<sup>110</sup>Securities and Exchange Board of India, Business Responsibility and Sustainability Reporting (BRSR) framework. Top 1,000 listed entities by market capitalisation mandated to disclose since FY2022–23; BRSR Core introduced assurance requirements from FY2023–24.

<sup>111</sup>Reserve Bank of India, Framework for Acceptance of Green Deposits (June 2023) and Draft Disclosure Framework on Climate-related Financial Risks (February 2024).

<sup>112</sup>COP30 Presidency and COP29 Presidency, *Baku to Belém Roadmap to 1.3T* (2025). The roadmap operationalises the New Collective Quantified Goal on climate finance.

<sup>113</sup>UNFCCC, Decision 1/CMA.6 on the New Collective Quantified Goal, Baku (November 2024). Goal of at least USD 300 billion per year in public climate finance to developing countries by 2035, within a broader goal of USD 1.3 trillion per year.

**8. ICVCM’s next methodology assessments.**

The Integrity Council for the Voluntary Carbon Market is expected to complete assessments of remaining REDD+ methodologies, cookstove methodologies, and waste management methodologies during 2026. The decisions will shape supply composition for the Core Carbon Principles labelled credit market over the next five years.<sup>114</sup>

**9. The Tropical Forests Forever Facility’s capitalisation.**

The TFFF’s financial structuring and additional sovereign commitments through 2026 will determine whether the Facility becomes a structural addition to the forest finance architecture or a ceremonial announcement.<sup>115</sup>

**10. The next phase of SBTi and VCMi guidance.**

The Science Based Targets initiative’s 2025 consultation on the role of carbon credits in corporate net-zero pathways, and the Voluntary Carbon Markets Integrity Initiative’s Claims Code of Practice, will continue to shape corporate demand for voluntary credits. A more permissive stance on credits within Scope 3 would materially expand demand; a more restrictive stance would accelerate the flight to quality already underway.<sup>116117</sup>

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<sup>114</sup>Integrity Council for the Voluntary Carbon Market, “Carbon credits from current renewable energy methodologies will not receive high-integrity CCP label” (decision of 8 August 2024). Eight methodologies, approximately 236 million unretired credits, or 32 per cent of the voluntary carbon market.

<sup>115</sup>Tropical Forests Forever Facility (TFFF), launched at COP30 Belém (November 2025). 53 countries endorsed the launch declaration; over USD 5.5 billion announced at launch.

<sup>116</sup>Science Based Targets initiative, ongoing consultation on the role of carbon credits in corporate net-zero pathways (2025). The initiative’s decisions will materially affect demand for high-integrity credits.

<sup>117</sup>Voluntary Carbon Markets Integrity Initiative, *Claims Code of Practice* (2024). Establishes demand-side criteria for corporate use of carbon credits.

## 6.2 A structural agenda for Indian sustainable finance

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From the Foundation’s perspective, five structural priorities follow from the analysis in this Annual Review.

First, the integrity architecture of the Indian domestic offset mechanism should be tightened during the first compliance cycle, not deferred to later iterations. The empirical and institutional evidence reviewed in Part I and Part V is sufficient to justify categorical exclusions, methodology restrictions, and benefit-sharing requirements in the initial rules of the Indian Carbon Market. Retrofitting integrity onto an established market is harder than building it in from the start.

Second, Indian sustainable finance regulation should be further harmonised across the SEBI, RBI, and IFSCA perimeters. The current architecture produces overlapping but non-identical disclosure, stress testing, and product authorisation requirements. A common core framework, aligned with IFRS S2 and with the emerging international taxonomy standards, would reduce compliance cost for Indian issuers and institutional investors without weakening the domestic regulatory grip.<sup>118</sup>

Third, the institutional capacity required to absorb the scale of climate capital implied by India’s transition pathway must be built deliberately. The International Energy Agency’s India Energy Outlook 2024 estimated transition investment requirements at approximately USD 160 billion annually by 2030, a figure materially above current delivered flows. The absorption of this capital requires domestic project pipelines, domestic intermediation capacity, and risk-sharing instruments that are presently underdeveloped.<sup>119</sup>

Fourth, the Indian carbon market architecture should be designed for strategic interaction with CBAM and equivalent instruments. The alternative, treating CBAM as an external fact to be absorbed rather than an endogenous variable that Indian policy can shape through unilateral or bilateral measures, sacrifices strategic leverage.

Fifth, and underpinning the preceding four, the knowledge infrastructure of Indian sustainable finance requires deliberate cultivation. This review, along with the Foundation’s working paper series and the research programmes of its peer institutions, is part of that infrastructure. Sustainable capital is an intellectually demanding field. Its domestic development in India depends on the depth of the analytical work that underpins policy choice. That work must continue.

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<sup>118</sup>International Sustainability Standards Board (ISSB), IFRS S2 Climate-related Disclosures, effective for annual reporting periods beginning on or after 1 January 2024, with jurisdiction-specific adoption timelines.

<sup>119</sup>International Energy Agency, *India Energy Outlook 2024* (Paris: IEA, 2024).

## STATISTICAL APPENDIX

Key data points for the year under review

**Table A.1. Global carbon pricing at a glance**

Indicator (2024 unless noted)	Value
<b>Number of carbon pricing instruments (2025)</b>	80
<b>Share of global GHG emissions covered (2025)</b>	approx. 28 per cent
<b>Carbon pricing revenues, 2024</b>	above USD 100 billion
<b>Share of emissions covered by a price, 2014</b>	approx. 12 per cent
<b>EU ETS emissions reduction since 2005</b>	approx. 50 per cent
<b>Average EUA price, 2024</b>	EUR 65 / tCO <sub>2</sub>
<b>Voluntary carbon credit issuance, 2024</b>	276 Mt CO <sub>2</sub> e (–13 per cent)
<b>Voluntary carbon credit retirements, 2024</b>	202 Mt CO <sub>2</sub> e (record)
<b>Unretired VCM credit pool, 2024</b>	approx. 1 billion tonnes

Source: World Bank State and Trends of Carbon Pricing 2025; MSCI; ESMA.

**Table A.2. Global climate finance, key aggregates**

Aggregate	Value
<b>Global climate finance, 2023</b>	USD 1.9 trillion
<b>Global climate finance, 2024 (prelim.)</b>	above USD 2 trillion
<b>Mitigation finance, 2023</b>	USD 1.78 trillion
<b>Adaptation finance, 2023</b>	USD 65 billion
<b>Dual-benefit finance, 2023</b>	USD 58 billion
<b>International climate finance to EMDEs ex-China, 2023</b>	USD 196 billion
<b>Annual climate finance need, 2024–2050</b>	USD 8.6 trillion
<b>Sustainable debt issuance, 2024</b>	above USD 1 trillion (5th yr.)
<b>NCQG public finance target, 2035</b>	at least USD 300 billion/year
<b>NCQG mobilisation target, 2035</b>	at least USD 1.3 trillion/year

Source: Climate Policy Initiative, Global Landscape of Climate Finance 2025; UNFCCC decision 1/CMA.6.

**Table A.3. India CCTS at a glance, fiscal year 2025–26**

Parameter	Value
<b>Total obligated entities under compliance</b>	490
<b>Sectors covered (Phases I and II)</b>	7
<b>Phase I notification date (4 sectors, 282 entities)</b>	October 2025
<b>Phase II notification date (4 sectors, 208 entities)</b>	13 January 2026
<b>Approved offset methodologies (March 2025)</b>	8
<b>Indian Carbon Market Portal launch</b>	21 March 2026
<b>Expected commencement of CCC trading</b>	mid-2026
<b>Cumulative VCM issuance from Indian projects, end-2024</b>	approx. 370 Mt CO <sub>2</sub> e
<b>India global rank by VCM issuance</b>	2nd (after United States)
<b>Installed renewable capacity, end-2025</b>	approx. 220 GW
<b>500 GW non-fossil capacity target</b>	2030

Source: PIB, ICAP, Ministry of Power, Ministry of New and Renewable Energy; SCRF Working Paper SCRF-WP-2026-03-004.

## REFERENCES

*Primary and secondary sources cited in this Review*

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- Badgley, G., Freeman, J., Hamman, J. J., Haya, B. K., Trugman, A. T., Anderegg, W. R. L. and Cullenward, D. 2022. “Systematic over-crediting in California’s forest carbon offsets program.” *Global Change Biology* 28, no. 4: 1433–1445.
- Bhattacharya, S., Chaudhary, D., Rane, N. and others. 2024. “Carbon farming in India: are the existing projects inclusive, additional, and permanent?” *Climate Policy*. DOI: 10.1080/14693062.2024.2416497.
- Bureau of Energy Efficiency, Government of India. 2024. Detailed Procedure for Compliance under the Carbon Credit Trading Scheme, Version 1.0. New Delhi.
- Central Electricity Authority, Government of India. 2024. CO<sub>2</sub> Baseline Database for the Indian Power Sector. New Delhi.
- Climate Policy Initiative. 2025a. *Global Landscape of Climate Finance 2025*. San Francisco: CPI.
- Climate Policy Initiative. 2025b. *Global Landscape of Climate Finance 2025: EMDE Spotlight*. San Francisco: CPI.
- COP30 Presidency. 2025. Belém Political Package. UNFCCC, Belém, 22 November 2025.
- Corporate Accountability. 2025. *Another Nail in the Coffin of the Voluntary Carbon Market*. Washington, DC.
- European Commission. 2025. *Report on the Functioning of the European Carbon Market in 2024*. Brussels.
- European Parliament and Council. 2025. Regulation (EU) 2025/2083 amending Regulation (EU) 2023/956 establishing the Carbon Border Adjustment Mechanism.
- European Securities and Markets Authority. 2025. *EU Carbon Markets 2025*. Paris.
- Forest Trends’ Ecosystem Marketplace. 2025. *State of the Voluntary Carbon Market 2025*. Washington, DC.
- Forest Survey of India, Government of India. 2024. *India State of Forest Report 2023*. Dehradun.
- Gill-Wiehl, A., Kammen, D. M. and Haya, B. K. 2024. “Pervasive over-crediting from cookstove offset methodologies.” *Nature Sustainability* 7, no. 2: 191–202.
- Government of India. 2022. *Energy Conservation (Amendment) Act, 2022*. Act No. 19 of 2022.
- Government of India, Ministry of Environment, Forest and Climate Change. 2025. *Gazette Notification on GEI Targets for Aluminium, Cement, Chlor-Alkali, and Pulp and Paper (October 2025)*.
- Government of India, Ministry of Power. 2025. *Gazette Notification on Offset Methodologies, Carbon Credit Trading Scheme, 28 March 2025*.
- Green Climate Fund. 2025. *Project Approvals, Board Meetings B.42 and B.43*. Songdo.
- Integrity Council for the Voluntary Carbon Market. 2024. *Core Carbon Principles Assessment Framework, Version 2*. London.
- Integrity Council for the Voluntary Carbon Market. 2024. “Carbon credits from current renewable energy methodologies will not receive high-integrity CCP label.” London, 8 August.

- International Carbon Action Partnership. 2026. “Compliance obligations under India’s Carbon Credit Trading Scheme enter into force for seven sectors.” ETS News Update, 28 January 2026.
- International Energy Agency. 2024. India Energy Outlook 2024. Paris: IEA.
- International Finance Corporation. 2025. Emerging Market Green Bonds Report 2024. Washington, DC.
- International Sustainability Standards Board. 2023. IFRS S2 Climate-related Disclosures. London.
- Kesh, C., Sharma, A. and Chaturvedi, V. 2025. Unlocking India’s Voluntary Carbon Market: Challenges and the Path Forward. New Delhi: Council on Energy, Environment and Water.
- MSCI. 2026. Carbon Markets 2025 Year in Review. New York, January.
- Probst, B. S., Toetzke, M., Kontoleon, A., Díaz Anadón, L., Minx, J. C., Haya, B. K., Schneider, L., Trotter, P. A., West, T. A. P., Gill-Wiehl, A. and Hoffmann, V. H. 2024. “Systematic assessment of the achieved emission reductions of carbon crediting projects.” Nature Communications 15: 9562.
- Press Information Bureau, Government of India. 2026. “Government notifies Greenhouse Gas Emission Intensity targets for 208 more carbon-intensive industries.” Release ID 2217239, 13 January 2026.
- Reserve Bank of India. 2023. Framework for Acceptance of Green Deposits. Mumbai, June.
- Reserve Bank of India. 2024. Draft Disclosure Framework on Climate-related Financial Risks. Mumbai, February.
- Reserve Bank of India. 2025. Report on Trend and Progress of Banking in India 2024-25. Mumbai, December.
- Ritwik, S. and Pandey, S. K. 2025. Article 6 Implementation: Lessons for Emerging Markets. SCRF Working Paper No. SCRF-WP-2025-11-001.
- Ritwik, S. 2026. Carbon Credit Quality in India’s Voluntary Market: An Integrity Assessment. SCRF Working Paper No. SCRF-WP-2026-03-004.
- Romm, J. and others. 2025. “Are carbon offsets fixable?” Annual Review of Environment and Resources 50.
- Securities and Exchange Board of India. 2023. Business Responsibility and Sustainability Reporting Core. Mumbai.
- Science Based Targets initiative. 2025. Consultation on the Role of Carbon Credits in Net-Zero Strategies. London.
- Trencher, G., Nick, M., Carlson, J. and Johnson, M. 2024. “Demand for low-quality offsets by major companies undermines climate integrity of the voluntary carbon market.” Nature Communications 15: 6863.
- Tropical Forests Forever Facility. 2025. Launch Declaration, Belém, November 2025.
- UNFCCC. 2024. Decision 1/CMA.6 on the New Collective Quantified Goal. Baku.
- UNFCCC. 2024. Decision 5/CMA.6 on Guidance for Cooperative Approaches under Article 6.2. Baku.
- UNFCCC Article 6.4 Supervisory Body. 2025. Approval of AMM001: Afforestation, Reforestation, and Revegetation Methodology. Bonn, October.
- United Nations Environment Programme. 2024. Adaptation Gap Report 2024. Nairobi.

Verra. 2024. “New ICVCM Methodology Decisions Announced.” Washington, DC, August.

Voluntary Carbon Markets Integrity Initiative. 2024. Claims Code of Practice. London.

West, T. A. P., Bomfim, B. and Haya, B. K. 2024. “Methodological issues with deforestation baselines compromise the integrity of carbon offsets from REDD+.” *Global Environmental Change* 87: 102863.

World Bank. 2025. State and Trends of Carbon Pricing 2025. Washington, DC.

World Economic Forum. 2025. “Why investors must hone in on sustainable finance in 2025.” Geneva, September.

World Federation of Exchanges. 2025. The Dynamics of Voluntary Carbon Markets. London.

## ABOUT SCRF AND IISF

*Institutional information*

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### ***Sustainable Capital Research Foundation (SCRF)***

The Sustainable Capital Research Foundation is a research institution and think tank dedicated to the study of sustainable capital architecture, climate finance, and carbon market integrity. The Foundation publishes a working paper series, an annual flagship review, and thematic policy briefs. Its research programme is organised around three pillars: the architecture of compliance and voluntary carbon markets; the political economy of climate and green finance; and the institutional design of sustainable capital in the Global South.

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IISF is the education and certification arm of the **Sustainable Capital Research Foundation (SCRF)**. Together, SCRF and IISF form a comprehensive platform for sustainable finance research, education, and capacity building.

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