Ecosystem Marketplace
A FOREST TRENDS INITIATIVE

State of the Voluntary Carbon Market 2025

Meeting the Moment

Renewing Trust in Carbon Finance

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About Ecosystem Marketplace

Ecosystem Marketplace (EM), a non-profit initiative of Forest Trends, is a leading global source of credible information on environmental finance, markets, and payments for ecosystem services. For nearly two decades, EM has run the world's first and only globally recognized and standardized reporting and transparency platform for voluntary carbon market (VCM) credit pricing data, news, and insights.

EM's flagship State of the Voluntary Carbon Market reports and other analyses on carbon credit market dynamics (e.g., prices, volumes, projects, corporate buyers, sellers, etc.) and carbon standard issuance and retirement data have become anticipated industry staples. EM also provides a publicly accessible data intelligence dashboard and a news platform for market coverage.

EM data on prices, regulation, science, and other relevant issues on environmental services markets and climate finance have been used extensively by a range of market actors, from companies, journalists, and investors, to practitioners, natural resource agencies, academics, and local and indigenous communities

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Data on project registrations, credit issuances, and retirements come from the following project registries: ACR, ART, BioCarbon, CAR, Cercarbono (EcoRegistry), CDM, Global Carbon Council, Gold Standard, Plan Vivo, and VCS.

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Introduction

Over the 20-year history of Forest Trends' Ecosystem Marketplace (EM), we have seen carbon markets grow from a nascent idea into a mechanism with the potential to seriously mitigate global warming. State of the Voluntary Carbon Market reports have highlighted market trends and key developments in this actively evolving space, which has grown to meet a steady demand to offset greenhouse gas emissions (approximately 180-200 million tons of credits retired annually since 2021). Today, we continue to follow refinements in quality and integrity as the voluntary carbon market (VCM) works to transition to a new phase which reflects a greater focus on nature-based solutions, carbon removals, and interoperability with international compliance carbon markets.

While it will be tempting to readers to interpret the headline figures in this year's State of the Voluntary Carbon Market as a sign of weak demand for carbon credits, there is actually a very different explanation. This comes from EM's longitudinal experience and the "ear to the ground," thanks to the global network of market actors who share their data and insights with us.

What we are seeing is an ongoing reboot of the supply side of the VCM, in response to the growing sophistication of the demand side of the market. The legacy market of credits from older methodologies is winding down, while the next phase of the VCM, with a stronger emphasis on integrity, ramps up to scale. It is going to take time for the supply of credits to become available from new projects. In the meantime, steady demand from the end users of credits is pushing up the price of credits from the existing project types that are considered to be high quality. This could be a bumpy ride. The VCM is in the middle of a transition, and transitions take time and are often messy.

It is also important to note that while VCM transaction volumes have seen volatility of late, both across the complete market and within individual categories and project types, the pace of credit retirements has been much more stable over the past four years. This suggests that demand from end users retiring credits remains consistent.

It is not easy to separate these kinds of signals from the noise. The opacity of the VCM is one of its biggest weaknesses. Our position has long been that for the VCM to transition to a state of confidence and integrity, it must have transparency. Market actors and observers alike need access to reliable information to make informed decisions and accurately interpret why certain credits fetch certain prices and what that signals to the market.

As a community of practice working toward a common goal of driving investment in decarbonization and climate resiliency, VCM participants are laying the groundwork for businesses, institutions, and individuals to participate in multiple climate action pathways that fit their needs and values. These financial instruments are critical to bridging the major climate finance gaps that are so desperately needed. The shifts we're seeing in the market reflect the increasing sophistication and growing technical expertise of market actors and observers alike, especially compared to five years ago, ten years ago, and the very early days of the VCM.

After intense and sustained scrutiny of the VCM following a rapid increase in credit transaction and retirement volume in 2021 and 2022, we've seen market actors focus on rebuilding trust by creating guardrails to ensure market "integrity." This process has led to a flight to quality, with market actors learning by doing as they try to build consensus on and operationalize ever-more robust definitions of quality and integrity on both the supply and demand sides. In 2024, the ongoing decline in market value and transaction volume slowed, with demand growing for credits with multiple dimensions of integrity and quality. This served to bolster transaction volume for project types like Improved Forest Management and Landfill Gas Destruction, while other credit types that were constrained by supply saw

average prices increase, including Afforestation/Reforestation-Revegetation and Agriculture credits.

The data and insights in this report are the product of deep collaboration and mutual trust across the broadest network of market actors on the ground and stakeholders across the VCM value chain. Our team and network of advisors provide diligent analysis of market trends, informed by our collective and hard-earned wisdom over the last 20 years. By the time you read this, the report will be in the hands of our global audience of over 40,000 individuals who have come to rely on our work as a critical source of knowledge to understand the present state of the market, where it's going, and how those dynamics continue to play out in terms of the larger climate impact of the VCM.

We are deeply proud of these relationships and the credibility we've built over two decades. We know that our Respondents trust EM with their sensitive, confidential data because they also believe market transparency matters. We remain committed to delivering market analysis that bridges the knowledge gap and helps our readers understand opaque elements and segments of the market, but as a non-profit count on you to support this critical work.

It is our hope that the 2025 State of the Voluntary Carbon Market report will provide an indication of the most important issues facing the VCM in 2024 and beyond, as well as a glimpse of what can come next as the VCM continues to evolve to meet higher standards of quality and integrity.

Charlotte Barber, Associate Director, Ecosystem Marketplace
Alex Procton, Senior Manager, Data Solutions and Insights, Ecosystem Marketplace

Key Findings

1. **Total market transaction volume declined by 25 percent and average price declined by 5.5 percent in 2024.**
    - The total reported transaction value of the Voluntary Carbon Market (VCM) was $535M USD, a decrease of 29 percent from 2023.
    - The ongoing decline in the VCM that began in 2022 is gradually slowing. 2024 posted the lowest transaction volume since 2018, but market value is 1.9x higher than 2018.
2. While transaction volume, which is a proxy for VCM liquidity, continued to decline in 2024, **the volume of credits retired from the ten largest standards has plateaued at an elevated level since 2021, with 182 million tons of credits retired in 2024.**
    - Retirements of Forestry and Land Use credits remain steady at 68 million tons per year. Given concurrent declining retirements of Renewable Energy, Forestry and Land use became the most frequently retired credit type in 2024.
    - Credits from Household/Community Devices projects made up an increased share of retired offsets, reflecting sustained growth in project registrations and issuances in the category.
3. **There is a growing premium on credits from projects that remove carbon dioxide from the atmosphere** and sequester it in natural or engineered carbon pools. On average, removal credits are 381 percent more expensive than reduction credits in 2024—up from 245 percent in 2023.
    - Market share of removal credits has continued to grow slowly. Five percent of credits traded in 2024 originated from removal project types.
    - The price premium for removals substantially benefits nature-based credits from Afforestation-Reforestation/Revegetation (ARR), mangrove restoration, and agroforestry projects, which are the largest category of removal credits available today.
4. **The Integrity Council for the Voluntary Carbon Market's (ICVCM) Core Carbon Principles (CCPs) approval took center stage as an indicator of high quality.** Since only a relatively small share of project types was effectively approved during 2024 though, the effect on demand was isolated and overall market impact was relatively minimal.
    - Demand for Landfill Gas and Ozone Depleting Substances credits grew.
    - CCP-approved Reduced Emissions from Deforestation and Degradation in Developing Countries (REDD+) and ARR credits are not available on the market yet.
5. **Different categories of credits had different trajectories. Some categories gained market share while others saw volume or prices slip.**
    - **Forestry and Land Use transaction volume remained stable**, with average price declining in line with the broader market.
        - REDD+ continues to decline in market share (transaction volume fell 52 percent) while Improved Forest Management (IFM) saw explosive growth (transaction volumes grew over 3x).
        - ARR, Agroforestry, and Blue Carbon projects, which generate removal credits, saw average price increase by 20 percent.
    - **Waste Disposal volume grew over 3x, driven by demand for CCP-approved Landfill Gas credits.**
        - Biochar Production, which generates removal credits and is one of the smallest clusters in terms of transaction volume, had an average price of over $160 /metric ton of carbon dioxide equivalent (tCO_2e), over 25x the total market average price.

- **Credits from Renewable Energy projects continued to lose market share**, with transaction volume decreasing 23 percent in 2024.
    - Credits from biogas projects, which include Landfill Gas to Energy projects that may be eligible for CCP approval, are becoming more expensive while all other Renewable Energy clusters are seeing prices steadily decline.

6. **Buyer preference for credits from recent vintages reached unprecedented levels.** There was a 217 percent premium for credits with vintage from the last five years, compared to a 53 percent premium in 2023.
7. **Carbon market participants anticipate a positive impact on demand and supply in the VCM from Article 6 of the Paris Agreement**, but market participants don't view local jurisdictions as ready to engage with and implement Article 6 mechanisms.

Market Overview

Total Volume, Value, and Price

Section Insights

- 2024 marked the third year in a row of declining VCM transaction volume and market value, as the market continues to face dramatic fluctuations in fundamental supply and demand from credit standards and end users retiring credits.
- Total market value fell by 29 percent to $535M, a similar total value as in 2020, but this value was achieved with 84 $MtCO_2e$ of credits sold—just 40 percent of the 2020 transaction volume.
- The volume of credit retirements has remained steady even as issuance and transaction volume are in decline, indicating sustained fundamental demand for carbon credits even as market liquidity is strained.
- As a result, credit prices have remained structurally higher over the past three years. The average transaction price of $6.37 in 2024 was more than double the 2020 average price.

The past five years of market activity in the VCM have been marked by extreme swings in supply and demand: annual sales of carbon credits spiked in 2021 and have declined ever since, while retirement volumes remain elevated from 2021 onwards. For the third consecutive year, transaction volume and market value in the VCM declined in 2024, with EM Respondents submitting transaction data totaling 84 million metric tons CO_2e ($MtCO_2e$), representing a 25 percent fall in traded volume from the previous year (Table 1).

For the second year in a row, Respondents reported transacting fewer credits than were retired from the top ten carbon credit standards, suggesting declining inventories of the most sought-after credits in the face of sustained demand and bottlenecks in supply of new credits.

This was also the second year in a row of declining prices after a peak in 2022 of $7.37/$tCO_2e$. However, the rate of market contraction slowed in 2024 as credit prices held firm above $6/$tCO_2e$, more than double the average credit price in 2020 (Figure 1). Average credit prices fell slightly from $6.71/$tCO_2e$ to $6.34/$tCO_2e$, down six percent year-over-year. As a result of drops in both transaction volume and price, the total market value of the VCM fell by 29 percent, with a total value of $535M reported to EM in 2024 (Figure 2). This is a similar total value as was reported in 2020—however, given higher average prices in 2024, the volume of credit transactions required to generate that value was only 40 percent of the total volume in 2020 (Figure 3).

EM's estimates of transaction volume and market value are lower bounds for the VCM based on transaction data from actual credit sales, received from 82 EM Respondents with transactions in 2024, compared to 97 Respondents that reported transaction data in 2023. To understand the effect of the declining numbers of Respondents, we compared the transaction volume and average

Table 1. Annual Total Voluntary Carbon Market Transaction Volume, Value, and Price per tCO_2e for All Credits, 2023-2024

2023			2024			Percent Change		
Volume ($MtCO_2e$)	Value (USD)	Price	Volume ($MtCO_2e$)	Value (USD)	Price	Volume	Value	Price
112.4	$754.5M	$6.71	84.4	$535.1M	$6.34	-25%	-29%	-6%