

VOLUNTARY CARBON MARKET

2024 REVIEW



January 2025

INTRODUCTION

The year 2024 closed with positive news for international carbon markets. After nearly a decade of complex negotiations, countries agreed to formally operationalise Article 6 of the Paris Agreement—a major milestone for international carbon trade that COP29 hosted by Azerbaijan will be remembered for.

Yet 2024 proved to be another challenging year for the Voluntary Carbon Market (VCM) overall. The market was impacted by regulatory uncertainty and continued to face criticism for failing to uphold integrity, translating into decreased trading volumes and lower valuations across many project types. Our 2023 annual review report¹ anticipated this testing environment, pointing to signs of market consolidation but no rapid growth—but without a material bounce back in demand and pricing to the levels observed in 2021–2022.

The market data contained within this edition's report confirm this sentiment. Our Climate Focus [VCM Dashboard](#)² shows that issuance levels have dipped slightly compared to 2023 levels, with overall issuance reaching 287 MtCO₂e. Retirement levels have remained stable, however, signalling the market's resilience. In particular, nature-based project types such as Blue Carbon or Afforestation, Reforestation, and Revegetation have attracted attention and observed higher prices. This suggests that interest in the market is very much present, with buyers and investors adjusting their investment strategies and market exposure in light of unfolding developments. The most notable ones included:

- Approvals of selected registries and methodologies by the Integrity Council for the Voluntary Carbon Market (ICVCM) and ICAO's Technical Advisory Body for CORSIA, offering additional quality marks or confirming offtake eligibility.
- Outcomes of the Baku Climate Change Conference (COP29) on Article 6, which were informed by work done earlier in the year by the Article 6.4 Supervisory Body (SBM) that adopted key standards for methodologies and GHG removals.
- Discussions on claims, both by regulators like the European Union through its proposed Green Claims Directive that will affect the communication of carbon credits' use towards consumers, as well as voluntary initiatives such as the Science Based Target initiative's (SBTi) release of technical publications on the use of environmental attribute certificates.

The year 2024 brought a degree of clarity on some of these aspects, including CORSIA's Phase 1 eligibility requirements and the ICVCM's views on the quality of some of the most widely applied methodologies in the VCM. However, discussions on claims remain unresolved, and regulatory uncertainty in the context of Article 6 implementation and VCM transactions remains. These developments will continue to be leading themes throughout 2025, and we look forward to closely tracking their evolution and their impact on carbon market growth.

¹ *Climate Focus (2024) VCM Review 2023. Available [here](#)*

² *The VCM Dashboard tracks market activity from ten leading carbon standards: American Carbon Registry (ACR), Architecture for REDD+ Transactions (ART), BioCarbon, Cercarbono, Climate Action Reserve (CAR), Climate Forward, Global Carbon Council (GCC), Gold Standard (GS), Plan Vivo and Verra's Verified Carbon Standard (VCS).*

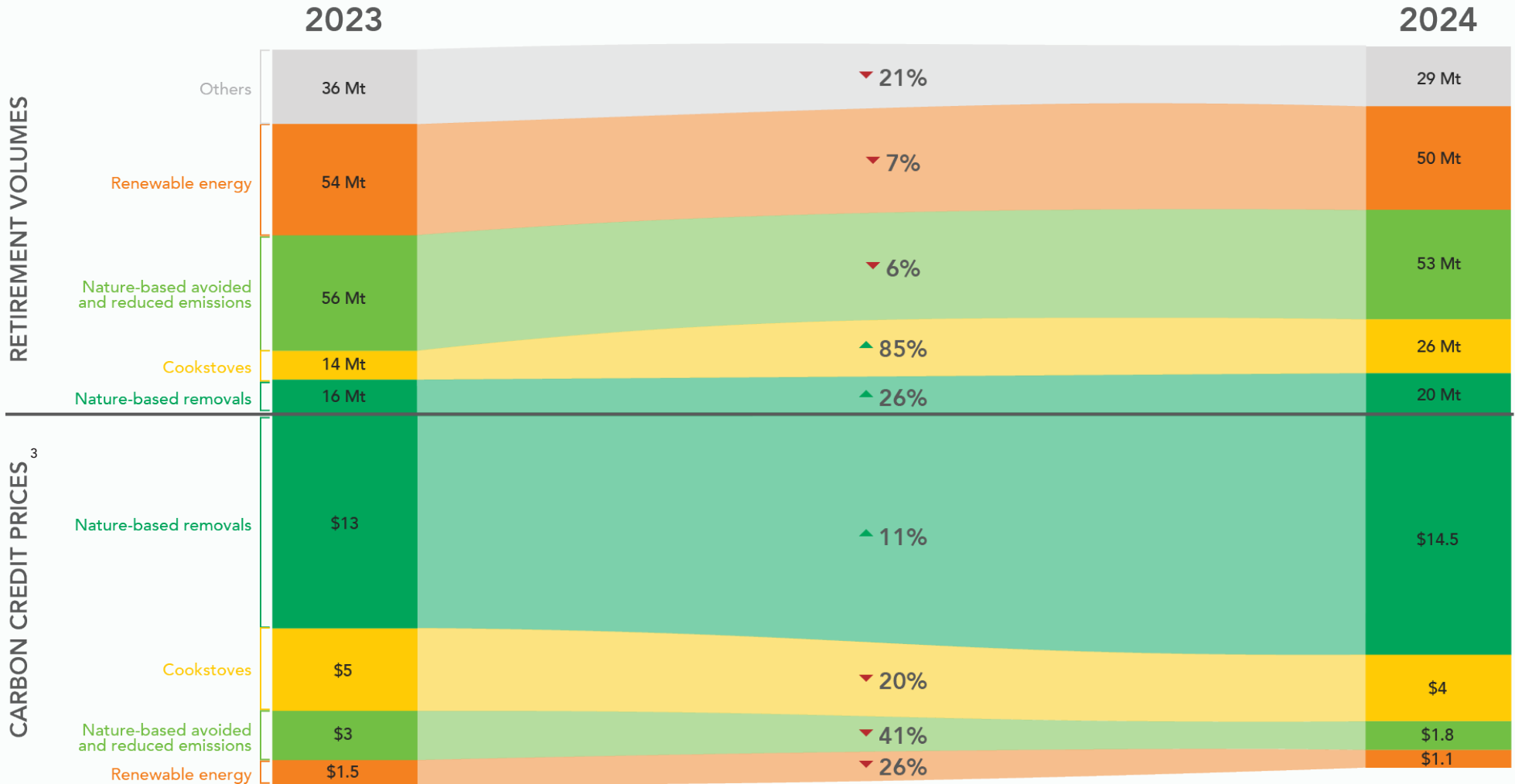


2024 IN NUMBERS

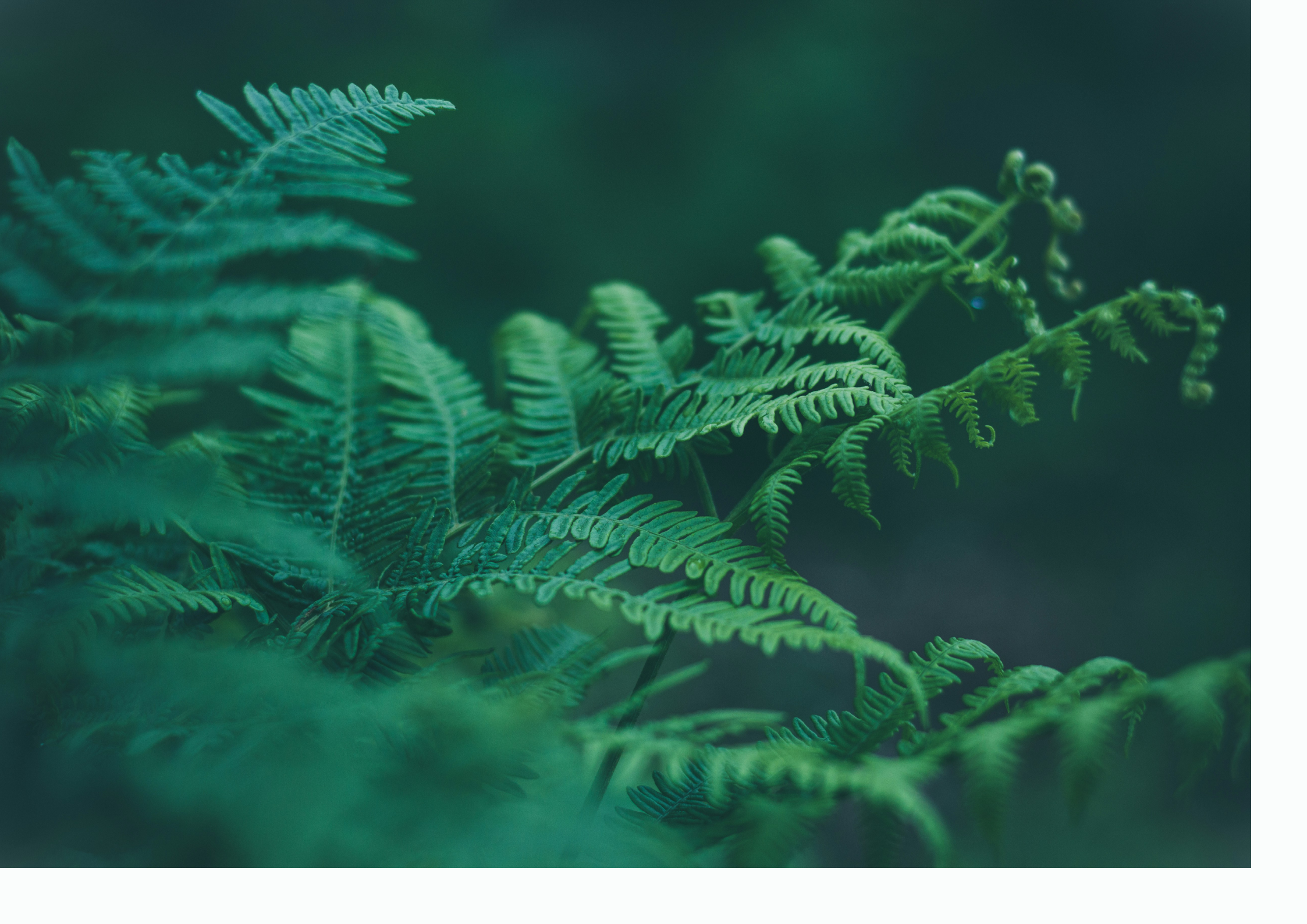


Total issuances: 308 Mt
Total retirements: 175 Mt

Total issuances: 287 Mt
Total retirements: 177 Mt



³ Presented carbon prices are based on average carbon prices transacted on leading exchanges across selected project categories as of end of 2023 (left-hand side) and the end of 2024 (right-hand side). These prices serve as indicative data points only and do not reflect the prices that individual projects may expect to attain in the market today. Project-level transaction data observed by Climate Focus indicates that prices offered by buyers for individual projects can both go below or considerably above the prices listed here.



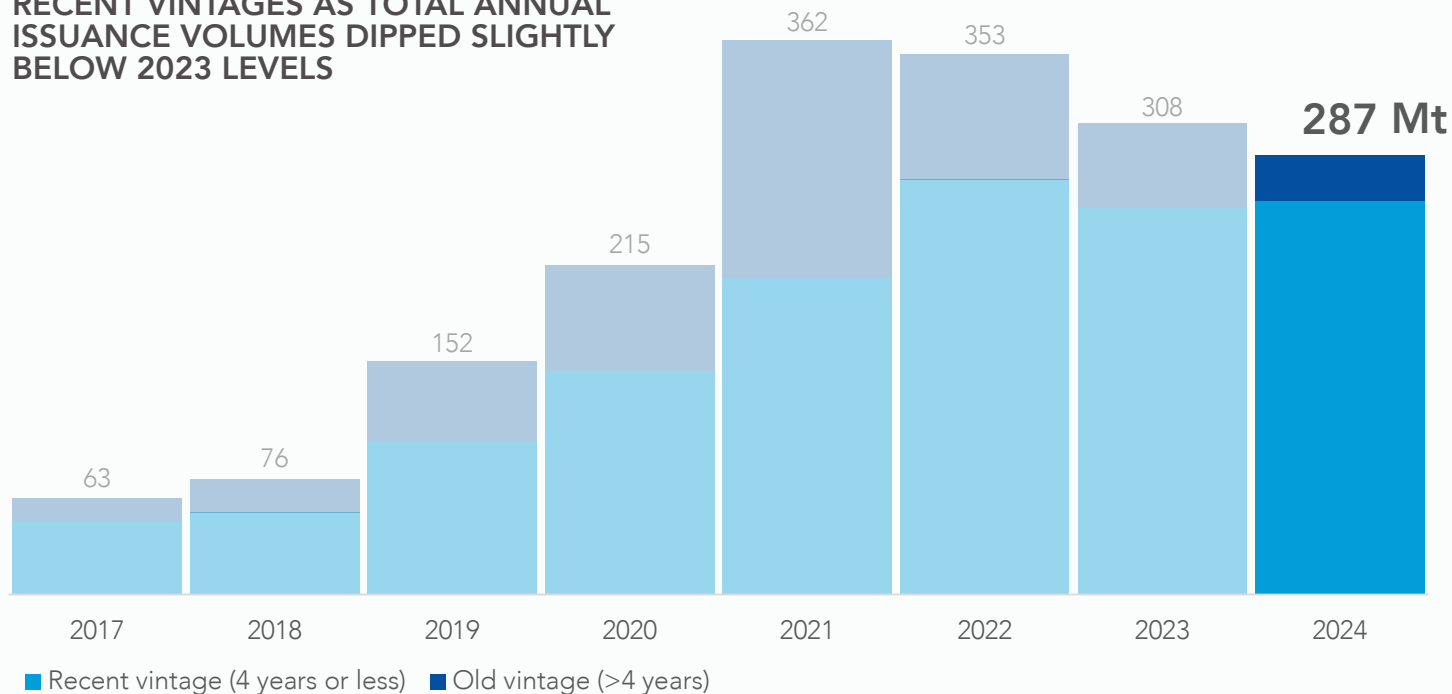
SHARE OF RECENT VINTAGES IN ISSUANCES HIT A RECORD HIGH

The share of recent vintages⁴ in annual issuance volumes hit a new high over 2024, representing 90 percent of all issued carbon credits. This came paired with slightly lower year-on-year absolute issuance volumes, with volumes reaching 287 Mt against the 308 Mt recorded in 2023.

We anticipate the interest for these newer vintages to continue to hold as buyers are increasingly cautious about purchasing older carbon credits issued against dated methodology versions. This trend is likely to be accelerated by the ICVCM's CCP labelling process, which takes into account methodology versions and has been excluding earlier versions of certain methodologies.

Aggregate issuances from the ten carbon registries tracked by the VCM Dashboard reached 2.16 Gt as of the end of December 2024.

FIG 1: SUPPLY WAS DOMINATED BY RECENT VINTAGES AS TOTAL ANNUAL ISSUANCE VOLUMES DIPPED SLIGHTLY BELOW 2023 LEVELS



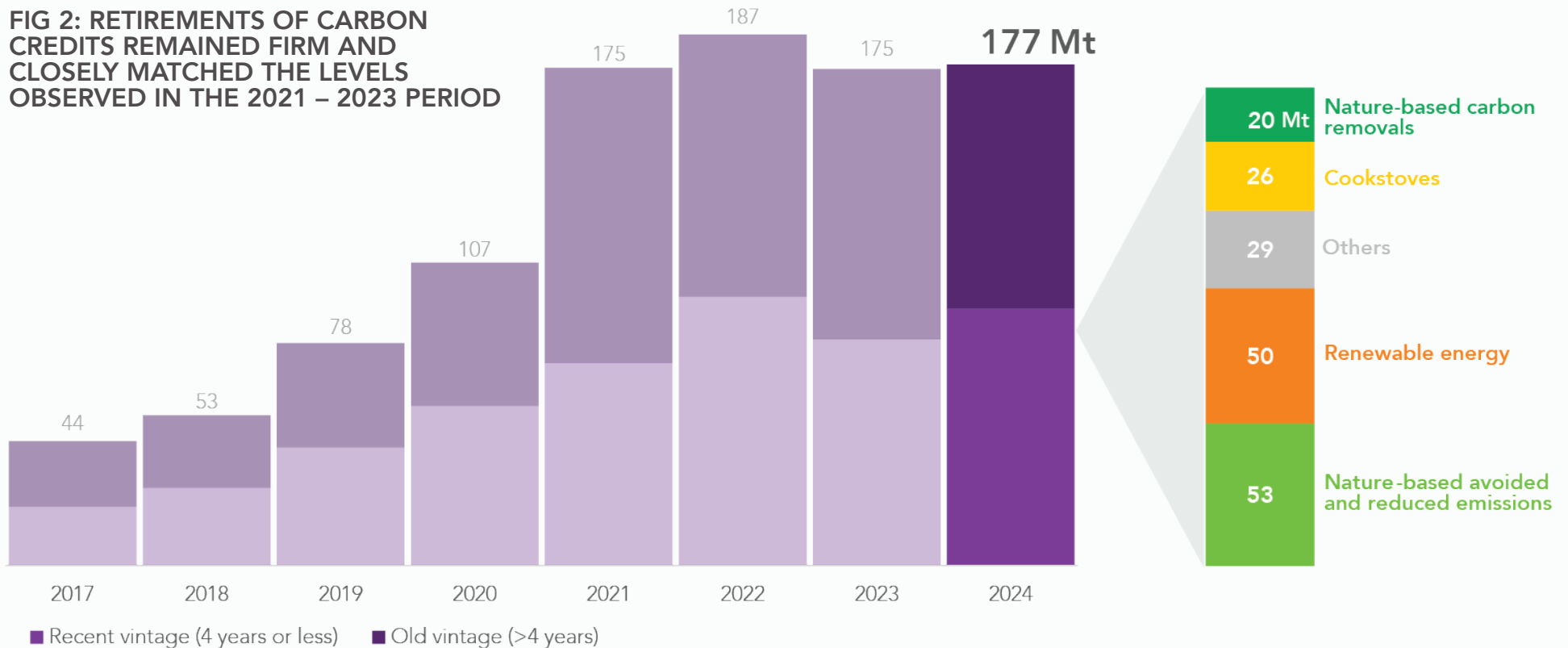
⁴ Issuances were categorised as 'Recent vintage' if the difference between the issuance year and vintage year is smaller than or equal to 3. Issuances with differences between the issuance year and the vintage year greater than 3 were categorised as 'Old vintage'.

RETIREMENTS OF CARBON CREDITS HOLD STEADY FOR THE FOURTH YEAR IN A ROW

Our data points to a stable demand for carbon credits, despite the challenging market conditions observed in 2024. Total retirements matched the volumes of the previous three years, and represented 15 percent of all historical retirements recorded in the VCM since the market's inception. As in previous years, the highest retirement levels were recorded in January and December, when corporate buyers typically complete their annual greenhouse gas accounting.

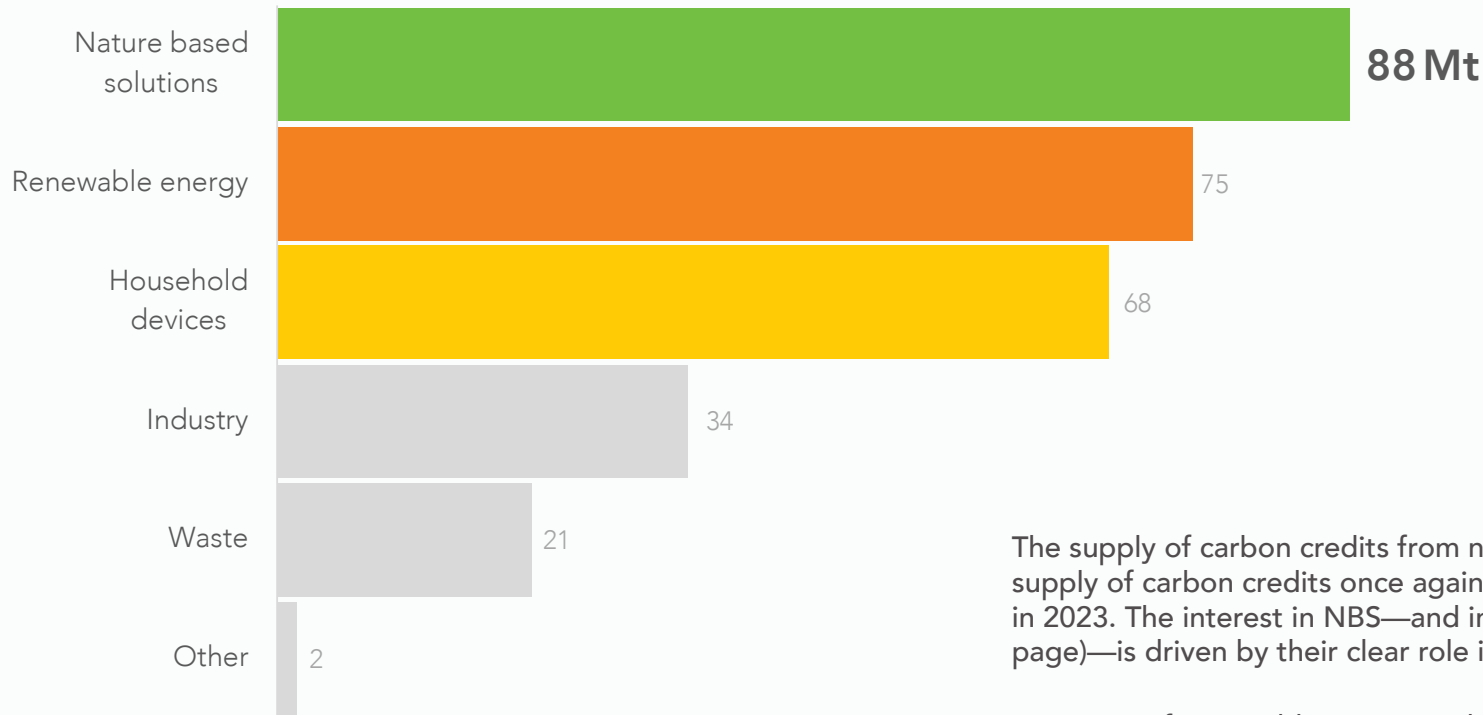
As aggregate end-use of carbon credits has remained steady, new buyers have compensated for those leaving the market. In 2024, more than 3,600 corporates have publicly disclosed retirements of carbon credits in the tracked registries, up by 8 percent from 2023. Interestingly, while we observed a growing role of recent vintages in aggregate issuance volumes (see previous page), only around half of all retirements in 2024 related to these newer vintages. The balance between recent and old vintages has been remarkably stable over the years, hovering between 40 and 50 percent.

FIG 2: RETIREMENTS OF CARBON CREDITS REMAINED FIRM AND CLOSELY MATCHED THE LEVELS OBSERVED IN THE 2021 – 2023 PERIOD



ISSUANCES FROM NBS LEAD THE WAY

FIG 3: ISSUANCES FROM NATURE-BASED SOLUTIONS DOMINATED SUPPLY, FOLLOWED BY RENEWABLE ENERGY AND HOUSEHOLD ACTIVITIES



The supply of carbon credits from nature-based solutions (NBS) led supply of carbon credits once again, matching the trend observed in 2023. The interest in NBS—and in particular, removals (see next page)—is driven by their clear role in corporate net-zero accounting.

Issuances of renewable energy carbon credits have remained stable, despite increasing pressure on pricing triggered by concerns around the climate integrity of some of the larger project categories that have dominated supply for many years. Cookstove and other household-level activities nearly matched renewable energy sector issuances for the first time. Carbon credit issuances from these household activities reached 68 Mt, representing one-quarter of total issuances in 2024.



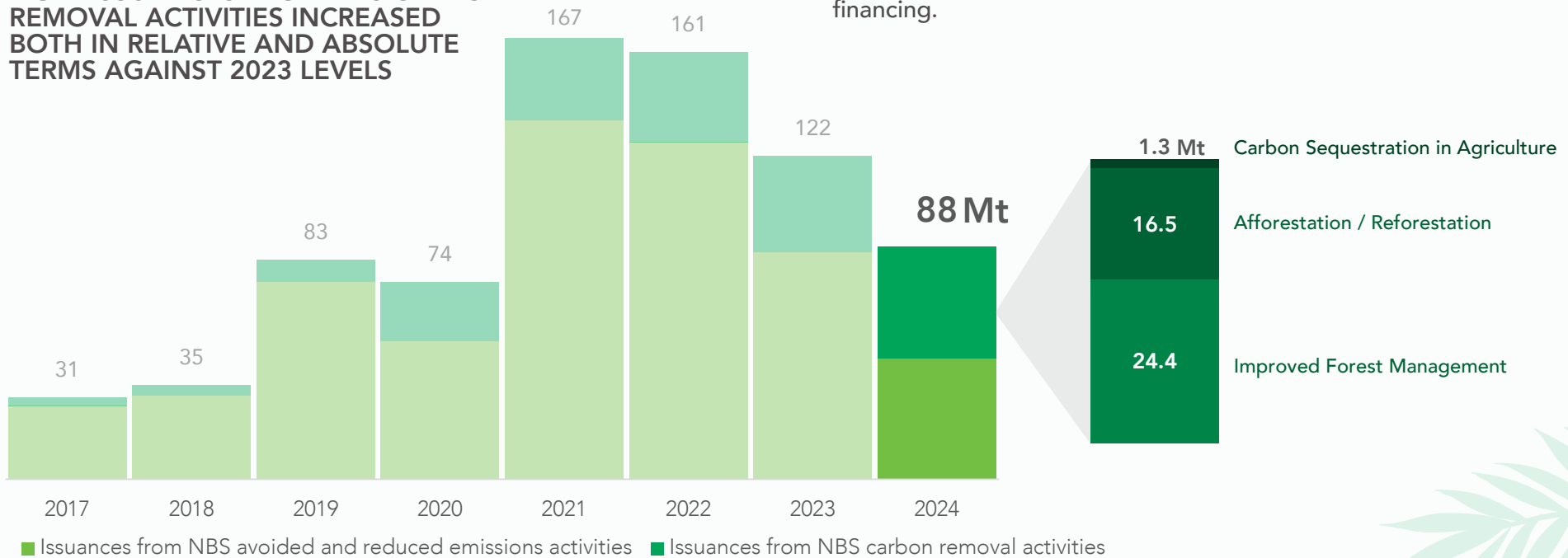
NBS REMOVAL ISSUANCES MATCH AVOIDED EMISSIONS VOLUMES FOR THE FIRST TIME

Issuances from NBS carbon removal projects⁵ increased to reach a new annual high of 42 Mt. This is in contrast to a decline of issuances from NBS avoided emissions activities⁶, which nearly halved from 86 Mt in 2023 to 46 Mt in 2024. Issuances from these removal activities have been remarkably stable throughout the year, overtaking monthly issuances of avoided emissions credits in nine of the twelve months, a new record.

We expect this development to continue as long as REDD+ activities are exposed to integrity concerns, and net-zero target-setting bodies such as the Science Based Targets Initiative continue to exclude the use of avoidance emissions credits in corporate net-zero accounting.

Removals from carbon dioxide removal (CDR) technologies that durably store CO₂ from the atmosphere are currently not materially represented in the tracked registries.⁷ We anticipate larger issuances to materialise in 2025, as registries like Verra's VCS release new CDR methodologies and existing corporate market commitments advance financing.

FIG 4: ISSUANCES FROM NBS CARBON REMOVAL ACTIVITIES INCREASED BOTH IN RELATIVE AND ABSOLUTE TERMS AGAINST 2023 LEVELS



⁵ Carbon removal projects include the following categories: (1) Afforestation/Reforestation/ Revegetation, (2) Carbon sequestration in agriculture, (3) Improved Forest management, (4) Wetland restoration.

⁶ Avoided emissions projects include the following categories: (1) Avoided deforestation, (2) Avoided conversion, and (3) Reduced emissions in agriculture.

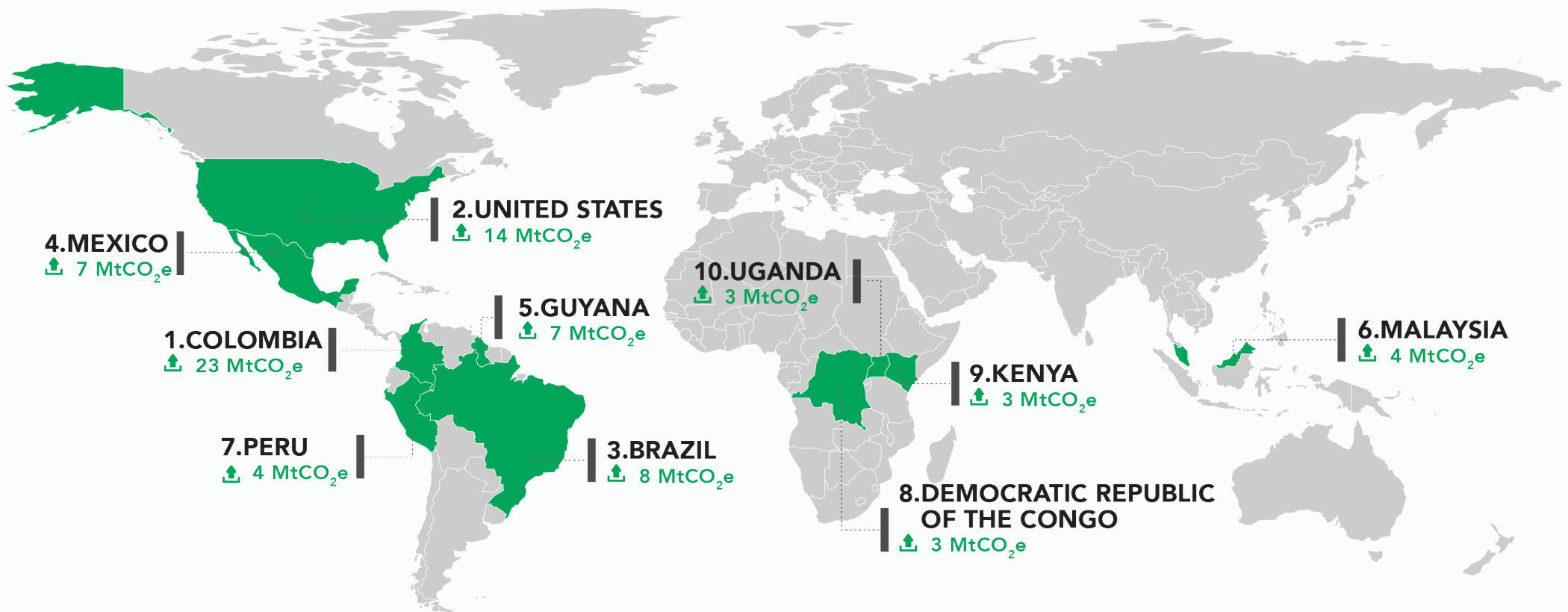
⁷ The first issuances from technology removal activities like biochar have been issued under standards that are currently not tracked by Climate Focus's VCM Dashboard, such as Puro.earth.

A HANDFUL OF COUNTRIES DOMINATE NBS SUPPLY

The top 10 countries hosting NBS projects generated just under 90 percent of the total NBS supply recorded in 2024. Four countries—Colombia, the United States, Brazil, and Mexico—issued nearly two-thirds of all the NBS credits. Countries like Peru and Cambodia played a more prominent role in previous years due to large issuance volumes from hosted REDD+ programmes, which have scaled down in 2024.

Since the inception of the market, the top three NBS credit supplier countries are now Colombia (154 Mt), Brazil (102 Mt), and Peru (90 Mt).

FIG 5: TOP TEN COUNTRIES WERE RESPONSIBLE FOR NEARLY 90 PERCENT OF THE TOTAL SUPPLY OF NBS CREDITS IN 2024



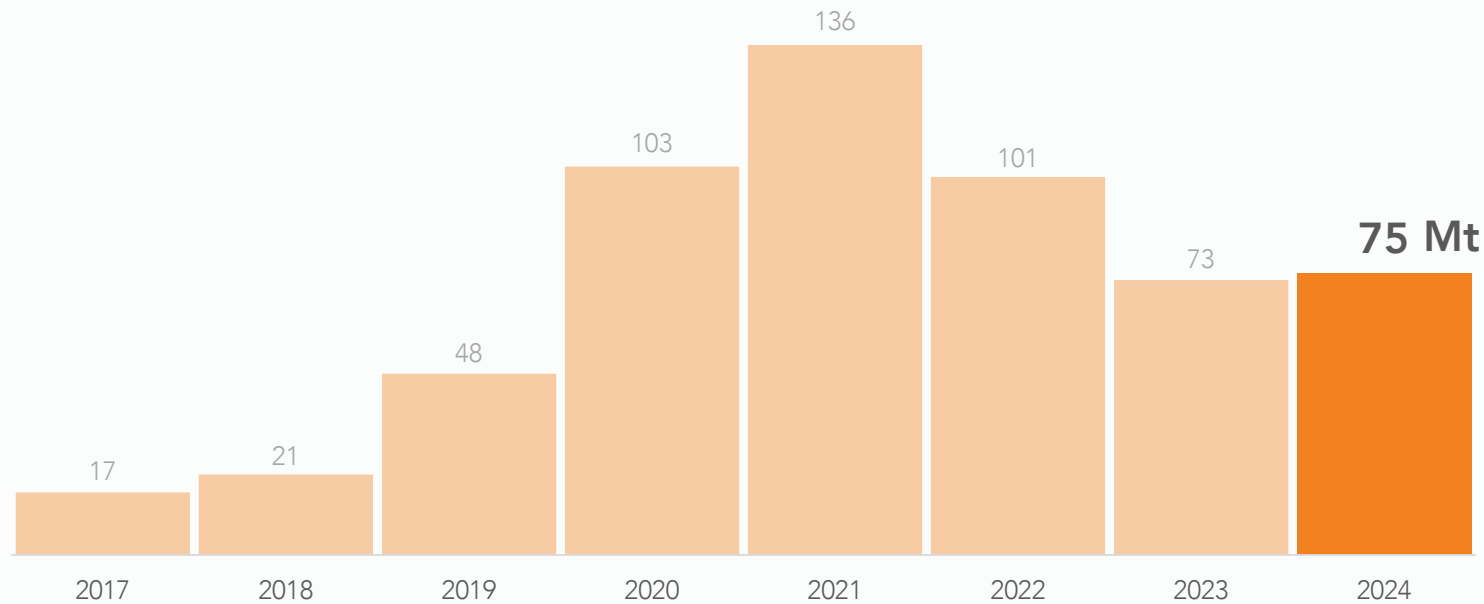


ISSUANCES FROM RENEWABLE ENERGY PROJECTS STABILISE

Issuance levels from renewable energy projects⁸ matched 2023 levels, reaching 75 Mt by year's end. Average prices for renewable energy credits have continued to decline throughout 2024, restricting the incentive for project developers to have new volumes verified and issued. The leading activities bringing credits to market included large-scale wind power activities (35 Mt), followed by large-scale solar projects (19 Mt) and large-scale hydropower projects (16 Mt).

Verra's VCS remained the leading registry issuing renewable energy credits, responsible for half of all issuances. This was followed by the Gold Standard with 41 percent, and Cercarbono with 9 percent. Compared to last year, however, the largest increase in renewable energy issuance volumes came from the Global Carbon Council (GCC), rising by 70 percent to 6 Mt in 2024. The Gold Standard also experienced a notable 56 percent increase in renewable energy credit issuances, while Verra's VCS decreased by 20 percent to 38 Mt in 2024.

FIG 6: ISSUANCES FROM RENEWABLE ENERGY ACTIVITIES PLATEAUED IN 2024 AFTER SEVERAL YEARS OF DECLINE



⁸ Renewable energy projects include the following categories: (1) Wind, (2) Solar, (3) Hydro, (4) Mixed, and (5) Renewable biomass, for both large- and small-scale.

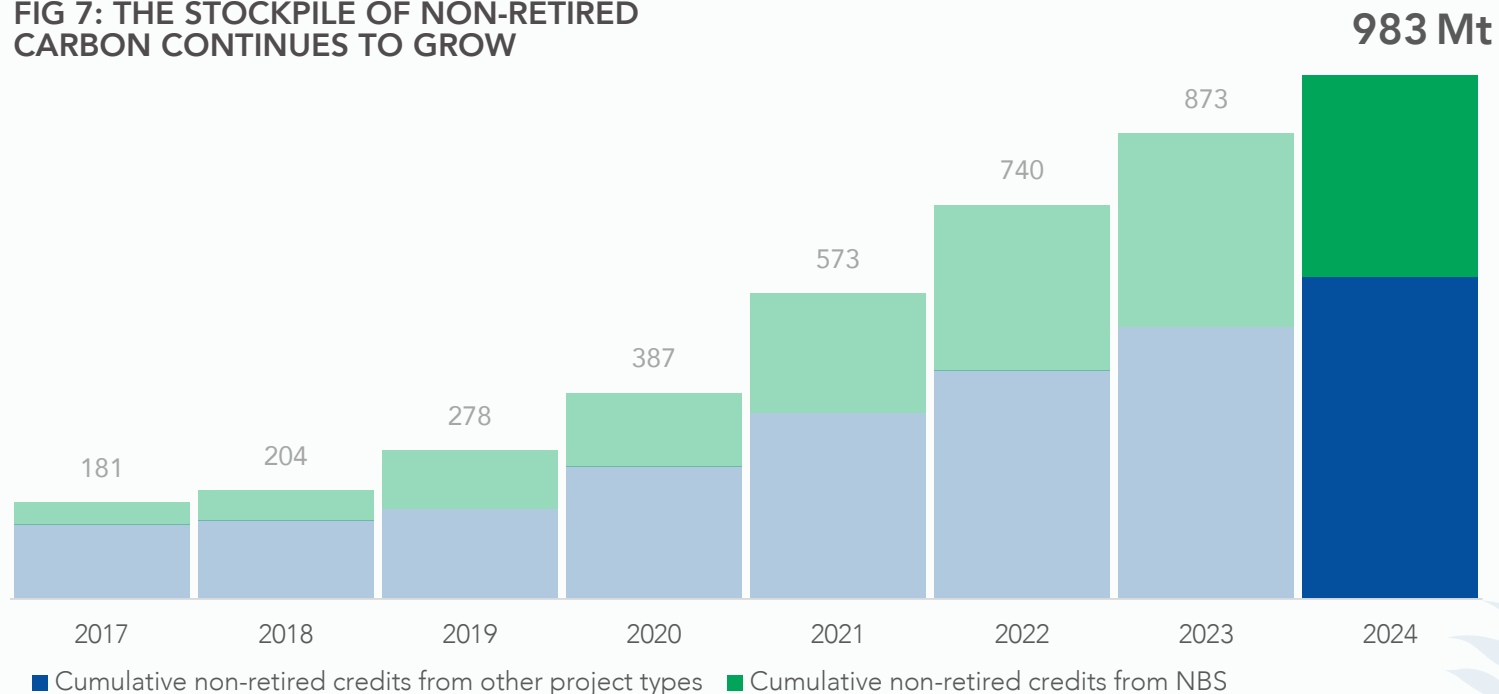


THE NUMBER OF UNUSED CREDITS NEARLY REACHED THE 1 GT MARK

Non-retired volumes increased steadily throughout the year, rising from 873 Mt in January 2024 to 983 Mt by year's end. Carbon credits from NBS projects comprised 38 percent of these volumes, followed by renewable energy projects at 29 percent, and household technology projects at 11 percent.

A large share of these carbon credits relates to pre-2016 vintages buyers are losing interest in. Our analysis shows that 210 Mt of non-retired carbon credits in the market relate to pre-2016 vintages, representing one-fifth of the existing stockpile of credits. Meanwhile, a total of 733 Mt non-retired carbon credits relate to pre-2021 vintages, representing three-quarters of the existing stockpile. This large volume of unused carbon credits is—in part—therefore a function of unwanted 'legacy' credits that will continue to show in future market data. This overshadows demand for newer, more valued vintages.

FIG 7: THE STOCKPILE OF NON-RETIRED CARBON CONTINUES TO GROW

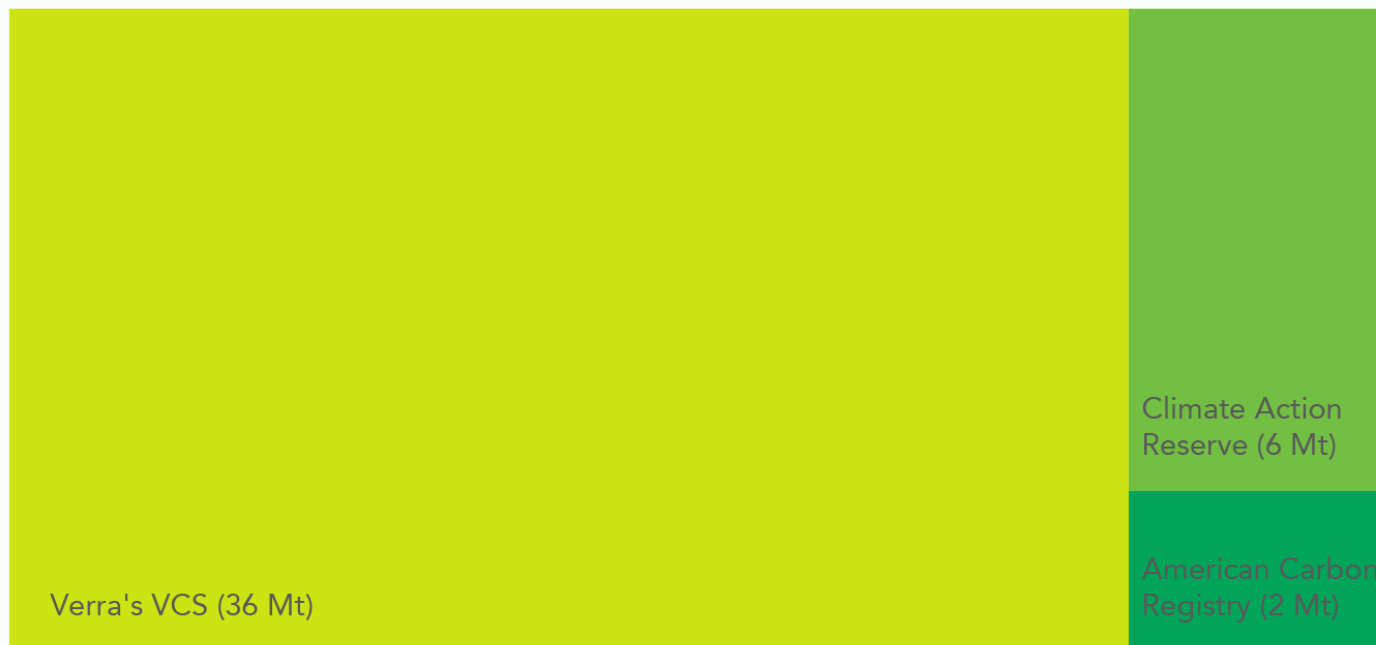


THE FIRST CCP-LABELLED CARBON CREDITS ENTER THE MARKET

Six carbon registries have now received approval from the ICVCM: ACR, ART, CAR, Gold Standard, Isometric and Verra's VCS. Three of these registries recorded the first issuances of CCP-labelled carbon credits: the ACR, CAR and Verra's VCS. The ICVCM also announced the initial set of carbon accounting methodologies that meet its CCPs. These 16 eligible methodologies relate to activities that capture methane from landfill sites, destroy ozone-depleting foams and refrigerant gases from discarded equipment, reduce emissions from deforestation and forest degradation (REDD+), and capture carbon from Afforestation, Reforestation, and Revegetation (ARR) activities.

The ICVCM has also rejected several methodologies in the second half of 2024, namely those related to certifying emission reductions from grid-connected renewable energy projects and mini-grids. We anticipate this decision to further diminish future issuances from these project types, as buyers will be increasingly cautious about making claims around these carbon credits unless they can be used in a compliance regime.

FIG 8: THREE CARBON REGISTRIES HAVE ISSUED CCP-LABELLED CARBON CREDITS IN 2024



WHAT WILL 2025 BRING?

The year 2025 is set to start on a cautious note, with market participants taking stock of the implications of COP29 while closely following the discussions on integrity and claims. The formal operationalisation of the Paris Agreement's Article 6 may have given a boost of confidence to global carbon markets, but the COP29 decisions alone are unlikely to result in an increase in demand for carbon credits in the short term. Additionally, there is a risk that the market may be flooded with Clean Development Mechanism projects transitioning to Article 6.4, raising integrity concerns about some of the first Article 6.4 Emission Reductions that will enter the market later this year.

Upcoming decisions by the ICVCM regarding the approval of methodologies—for example, for clean cooking and certain nature-based solutions activity types—may influence developers' project design choices and the buyers' willingness to offer premium pricing. More importantly, we expect that considerations regarding the fungibility of carbon credits across various offtake markets (e.g., CORSIA and domestic carbon pricing schemes) will increasingly guide pricing trends and drive market development throughout 2025. Investors will look to find an appropriate balance between recognising and rewarding high-quality projects while ensuring that procured carbon credits have a clear use case and are not at risk of becoming stranded assets.

The positive news is that, as highlighted in this 2024 VCM Review, the market has demonstrated resilience during what has been another challenging year. Substantial funds continued to flow through primary markets, driven both by individual corporate purchases as well as "buyer clubs" represented by initiatives like the Symbiosis Coalition and Frontier that promote advance market commitments for the next generation of nature-based solutions and technological removals. In addition, supply-side efforts around methodology revisions and quality labelling will continue to improve the integrity of carbon credits, lowering reputational risks associated with their use. We are optimistic about these developments and look forward to another year of collaboration with our partners and clients to promote the use of international carbon markets in accelerating investments into critically needed climate solutions.



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This VCM 2024 Review has been powered by the VCM Dashboard maintained by Climate Focus.

We welcome you to explore more details about the VCM on our Dashboard, which we update monthly. The Dashboard currently tracks market activity from the following leading carbon standards: American Carbon Registry, ART, BioCarbon, Cercarbono, Climate Action Reserve, Climate Forward, Global Carbon Council, Gold Standard, Plan Vivo and Verra's VCS.

For tailor-made advisory, including strategic advisory on the VCM, supply- and demand forecast, technical and financial project due diligence, and transaction support, please reach out to dashboard@climatefocus.com.

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