

2023 H1 OVERVIEW  
A PERIOD OF MARKET CONSOLIDATION

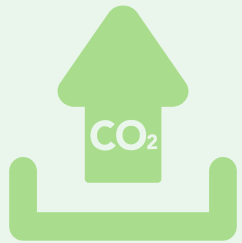
# VOLUNTARY CARBON MARKET





# HIGHLIGHTS

We welcome you to explore more details about the VCM on our Dashboard, which we update on a monthly basis.

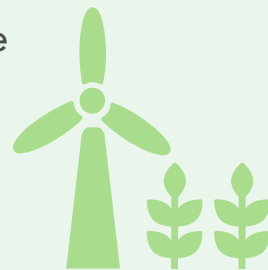


Carbon credit issuances in the first half of 2023 **matched issuance levels** of the same period last year at **143 Mt**, pointing to market consolidation.



There has also been a shift in the composition of nature-based solutions activities, with **issuances from avoided emissions activities decreasing** in H1 2023 compared to last year.

Nature-based solutions and renewable energy were at the forefront, jointly representing nearly **two-thirds** of all issuances in H1 2023.



Issuance levels from **renewable energy projects** however did drop significantly compared to last year, **declining** by one-quarter in absolute terms.

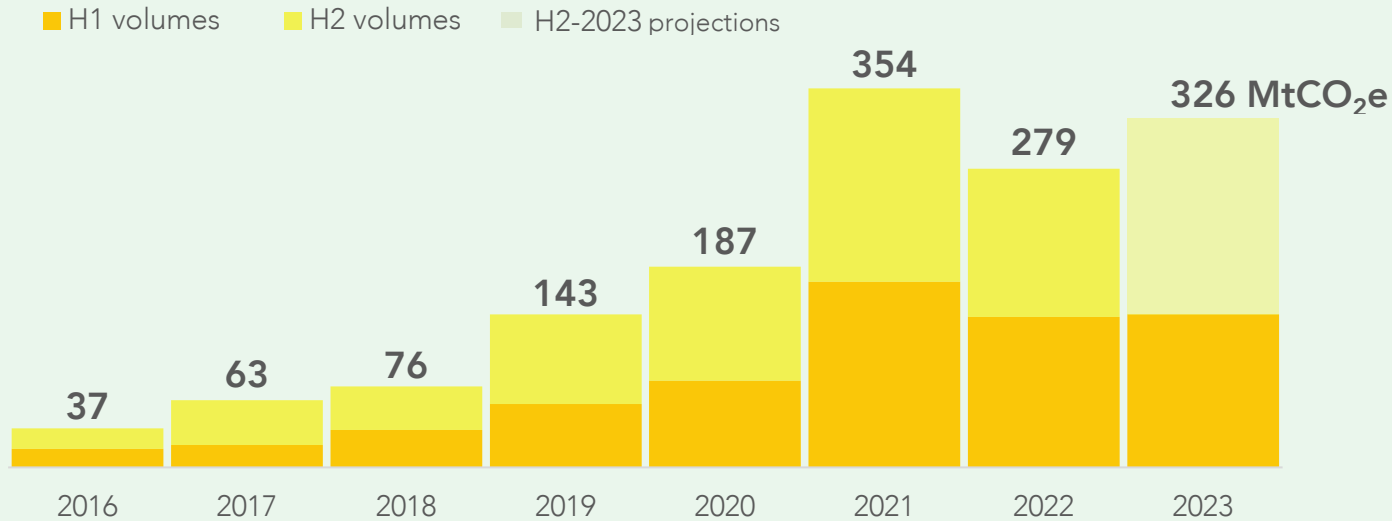


Non-retired carbon credit volumes increased steadily throughout this first half of this year, rising from 628 Mt in July 2022 to

**748 Mt** today.



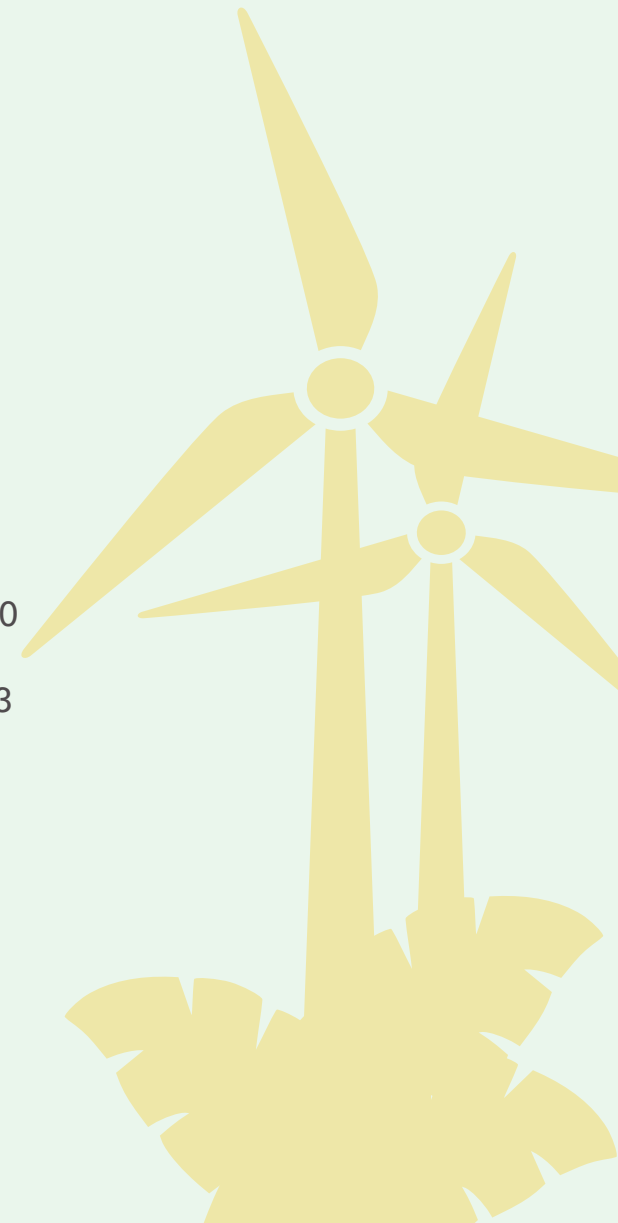
# ISSUANCE LEVELS STABILISE



**Issuance levels remained stable** in the first half of the year (143 Mt) compared to H1 2022 (140 Mt).<sup>1</sup> The **143 Mt** represents just under 10% of total credits issued since the inception of the voluntary carbon market. Based on past performance, we predict aggregate issuances for 2023 will breach the 300 Mt mark.<sup>2</sup> Cumulative issuance of VERs now stands at **1.59 Gt**.

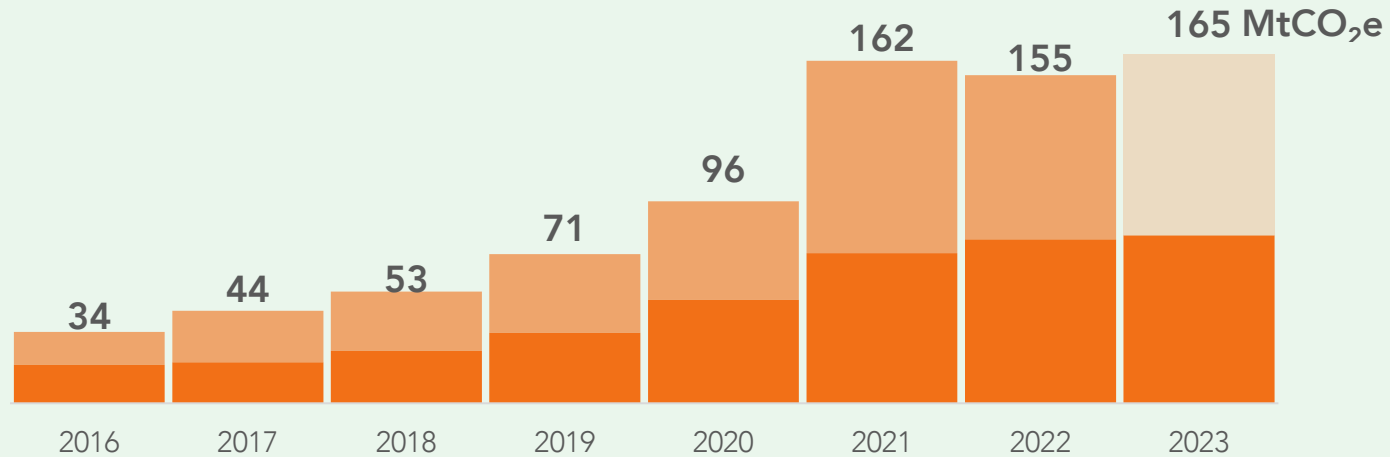
<sup>1</sup> Carbon credits certified under Verra's VCS represented 68% of total issuance recorded so far in 2023, followed by the Gold Standard at 19.5%, the ACR at 8.5% and CAR at 2%. Notably, carbon credits issuances under the VCS showed a decrease (-10%), while the Gold Standard increased by 9% compared to 2022 H1 levels.

<sup>2</sup> Our forecast for H2 2023 is based on extrapolating post-2016 annual H2 issuance performance to H2 2023. The ratio of aggregate H1 issuance volumes vs. H2 aggregate issuance volumes has been 1: 1.29. Provided aggregate issuance of 143 Mt in H1 2023, our issuance forecast for H2 is 184 Mt, totalling 327 Mt by the end of this year.



# RETIREMENT LEVELS PLATEAU

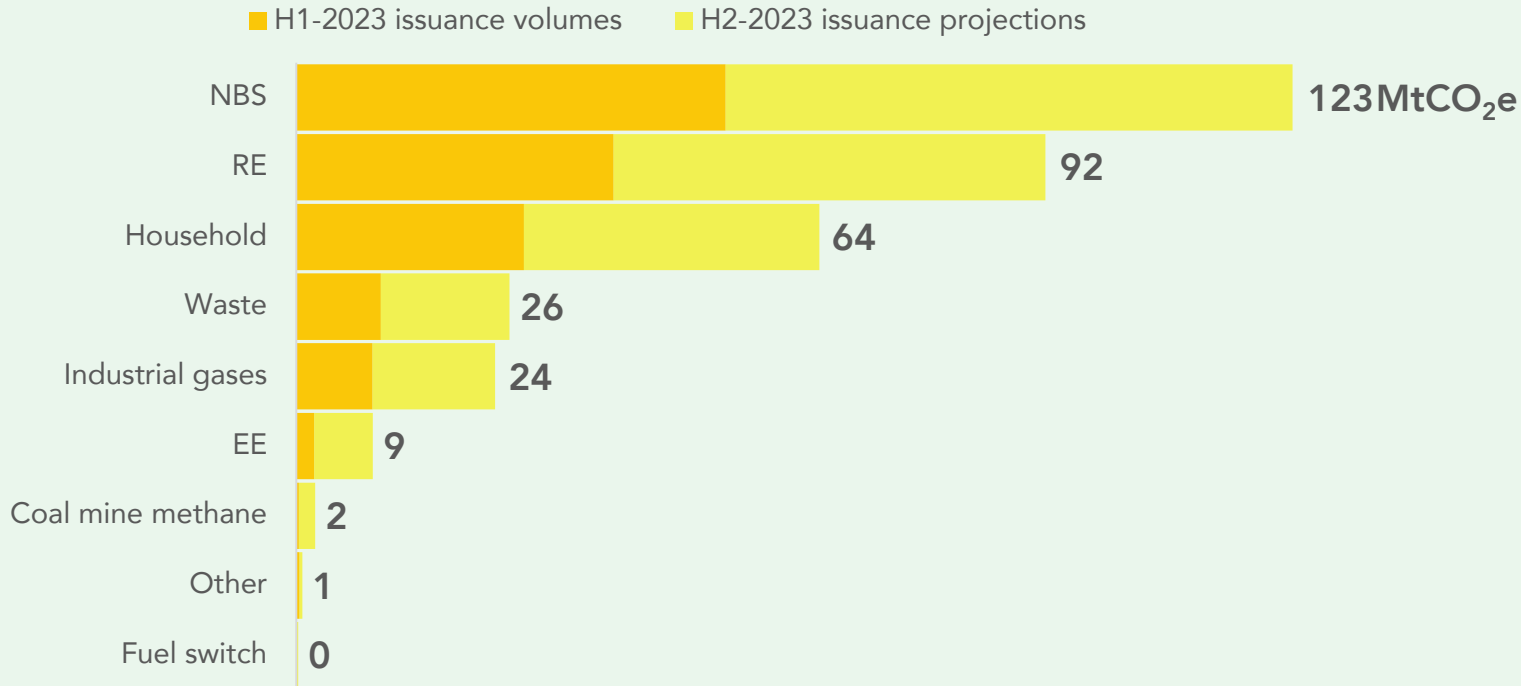
■ H1 volumes ■ H2 volumes ■ H2-2023



Retirements of carbon credits in H1 2023 plateaued at similar levels as last year (79 Mt). If the past H2 retirement trend holds, we predict that in total 165 Mt credits will be retired by the end of 2023.<sup>1</sup> This would set a new record. The H1 2023 retirements represent nearly **10% of all retirements since the market inception.**

<sup>1</sup> Post-2016 average ratio of aggregate H1 retirement volumes vs. H2 aggregate retirement volumes has been 1: 1.08. Provided aggregate retirements of 79 Mt in H1 2023 alone, our retirement forecast for H2 is 86 Mt, totalling 165 Mt over the entire 2023.

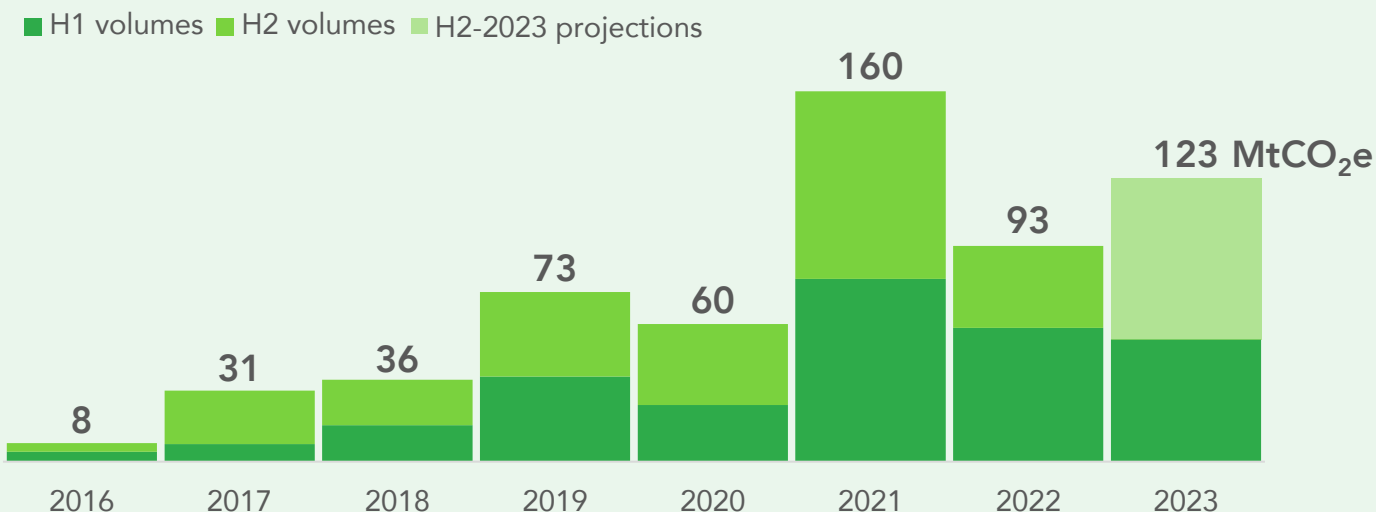
# NATURE-BASED SOLUTIONS LEAD THE WAY



Credit issuances in H1 2023 were dominated by **nature-based solution (NBS)** and **renewable energy (RE) projects**, jointly representing nearly **two-thirds of total issuances** in H1 2023. Markedly, issuance activity from **household-level** programmes (e.g., cookstoves and clean water) accelerated more than any other category, **tripling** in H1 2023 compared to the same period in 2022. Depicted above are the observed issuance volumes per project type recorded in carbon registries in the first half of 2023, as well as a forecast based on past trends for the second half of the year.<sup>1</sup>

<sup>1</sup> Post-2016 average ratio of aggregate H1 issuance volumes vs. H2 aggregate issuance volumes has been calculated for each activity type. These ratios have been applied to the issuances in H2-2023 to obtain the projections for the second half of the year.

# BUT OVERALL NBS ISSUANCES DECLINED

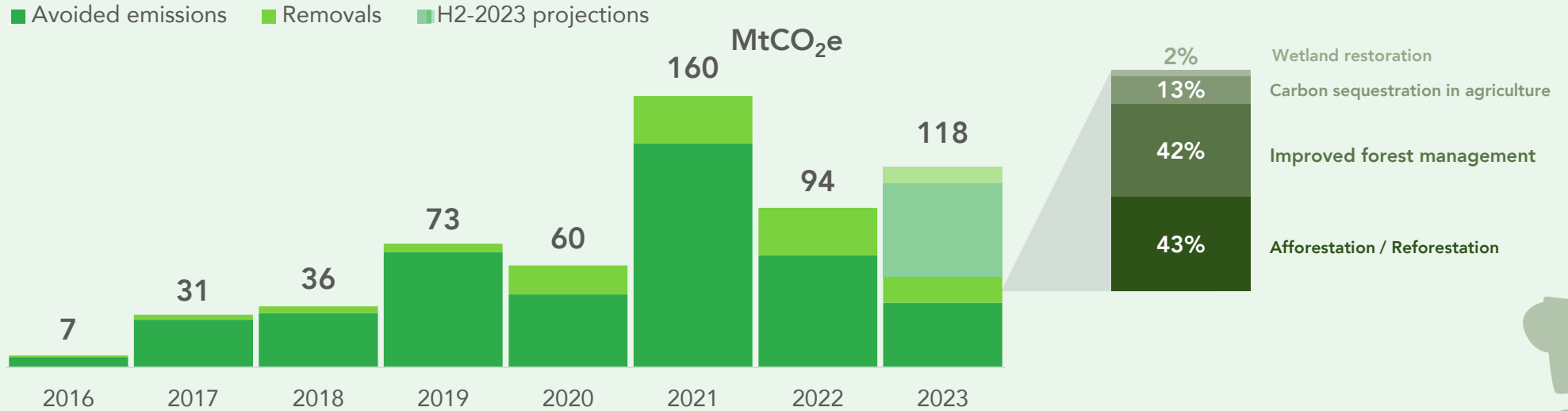


Issuance of carbon credits from **NBS activities declined by nearly 10%** (53 Mt) against H1 2022 levels (58 Mt).<sup>1</sup> The issuances in H1 2023 are equivalent to **9.45% of all NBS issuances since market inception**. Despite the decrease in NBS issuances observed over the past two years, current NBS issuances are still more than double those recorded in the first half of 2020 (25 Mt). If historical trends were to play out, total issuances from NBS activities could reach 123 Mt by the end of this year. There is however a high likelihood this will not materialise due to mounting demand pressure on REDD+ credits triggered by **environmental integrity concerns**.<sup>2</sup>

<sup>1</sup> NBS carbon projects include both nature-based avoided emissions and carbon removal activities.

<sup>2</sup> Post-2016 average ratio of aggregate H1 issuance volumes from NBS projects vs. H2 aggregate issuance volumes has been 1:1.32. Provided aggregate issuance of 53 Mt in H1 2023 alone, our issuance forecast for H2 is 70 Mt, totalling 123 Mt over the entire 2023.

# CARBON REMOVAL CREDITS STILL IN LIMITED SUPPLY

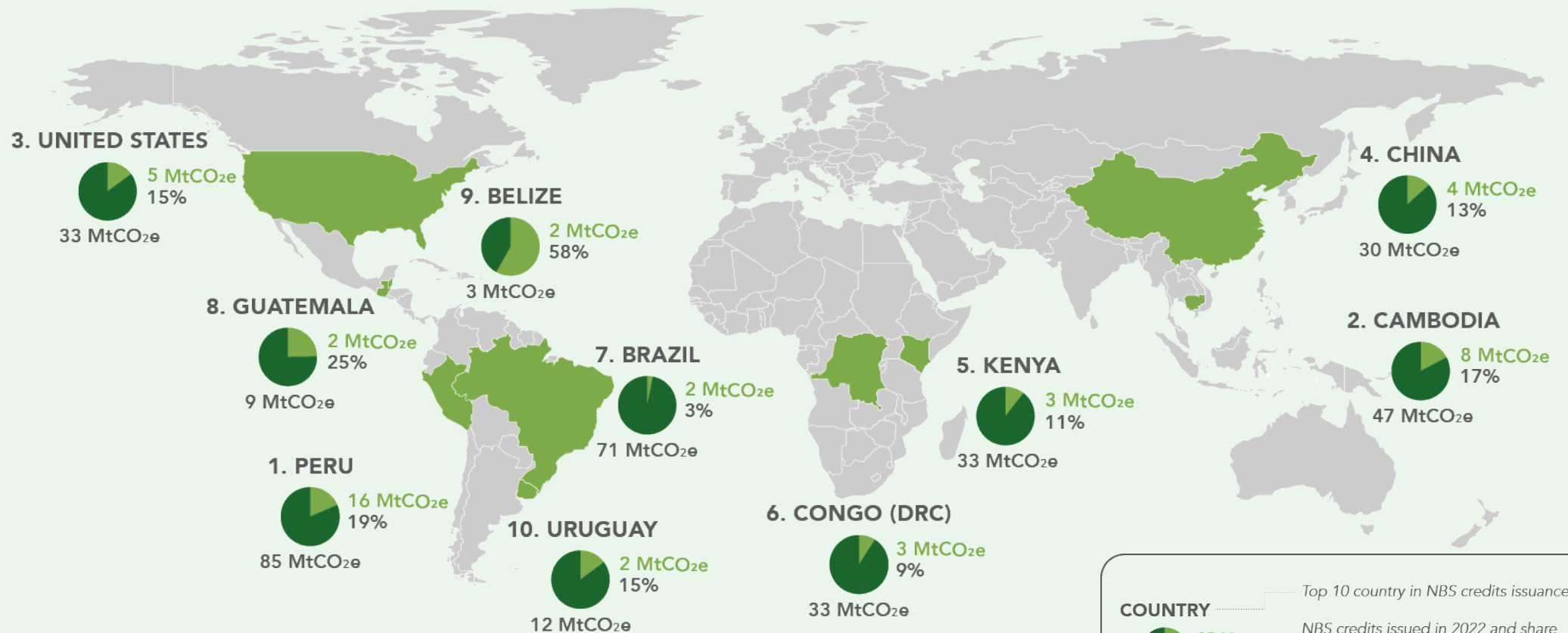


**Less than one-third** of all NBS issuances in the first half of 2023 came from **carbon removal activities** (15 Mt).<sup>1</sup> **Afforestation/Reforestation** activities led supply of removal credits, issuing 6.28 Mt in H1 2023. This was followed by **Improved Forest Management** practices, which picked up pace and removed 6.23 Mt in the first half of the year. The overall sluggish growth of carbon removal issuance rates signals challenges in the market’s ability to rapidly scale the supply-side amid increased interest around carbon removal credits.

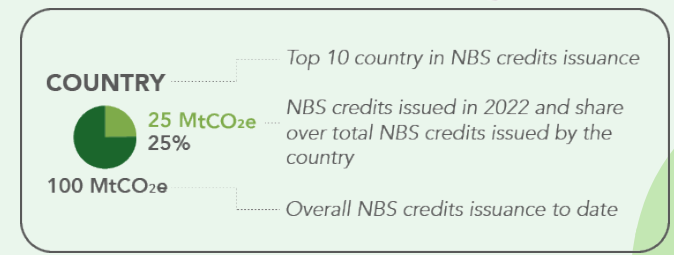
<sup>1</sup> Carbon removal projects include the following categories: (1) Afforestation/Reforestation, (2) Carbon sequestration in agriculture, (3) Improved Forest management, (4) Wetland restoration. Avoided emissions projects include the following categories: (1) Avoided deforestation, (2) Avoided conversion, and (3) Reduced emissions in agriculture.



# A FEW COUNTRIES DOMINATE NBS CREDIT SUPPLY

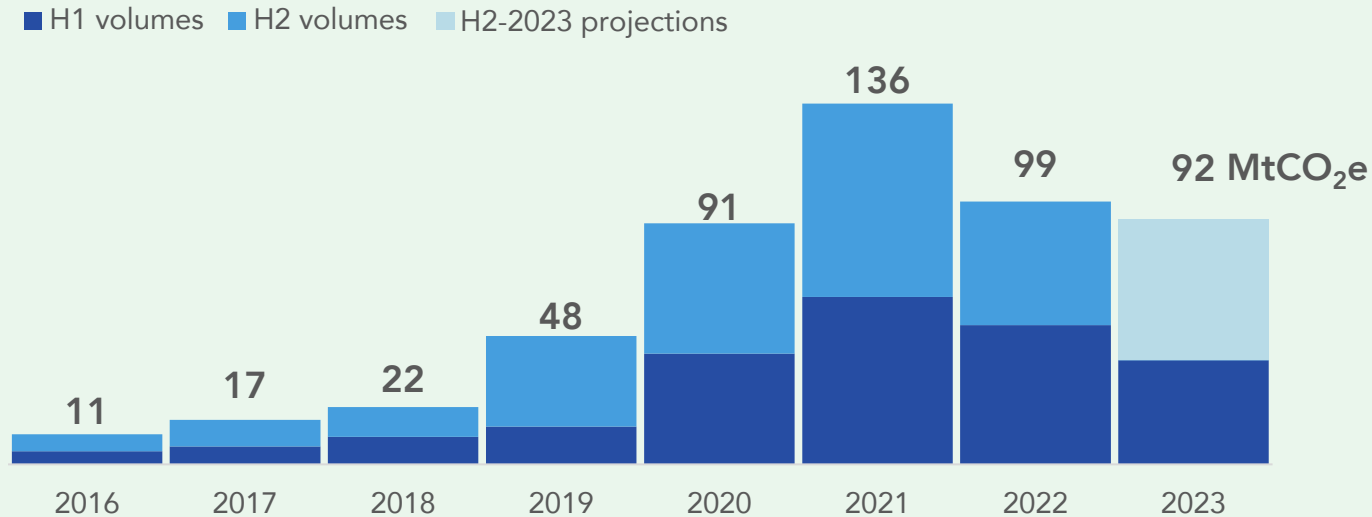


The **top 10 countries** hosting NBS projects generated **89.77% of the total NBS supply** recorded in H1 2023 (53 Mt). Two countries – **Peru and Cambodia** – dominated the supply side in H1 2023, issuing nearly half (45.38%) of all NBS credit so far this year. Since the inception of the voluntary carbon market, the top three NBS credit supplier countries include Peru (85.34 Mt), Indonesia (75.44 Mt), and Brazil (71.17 Mt).





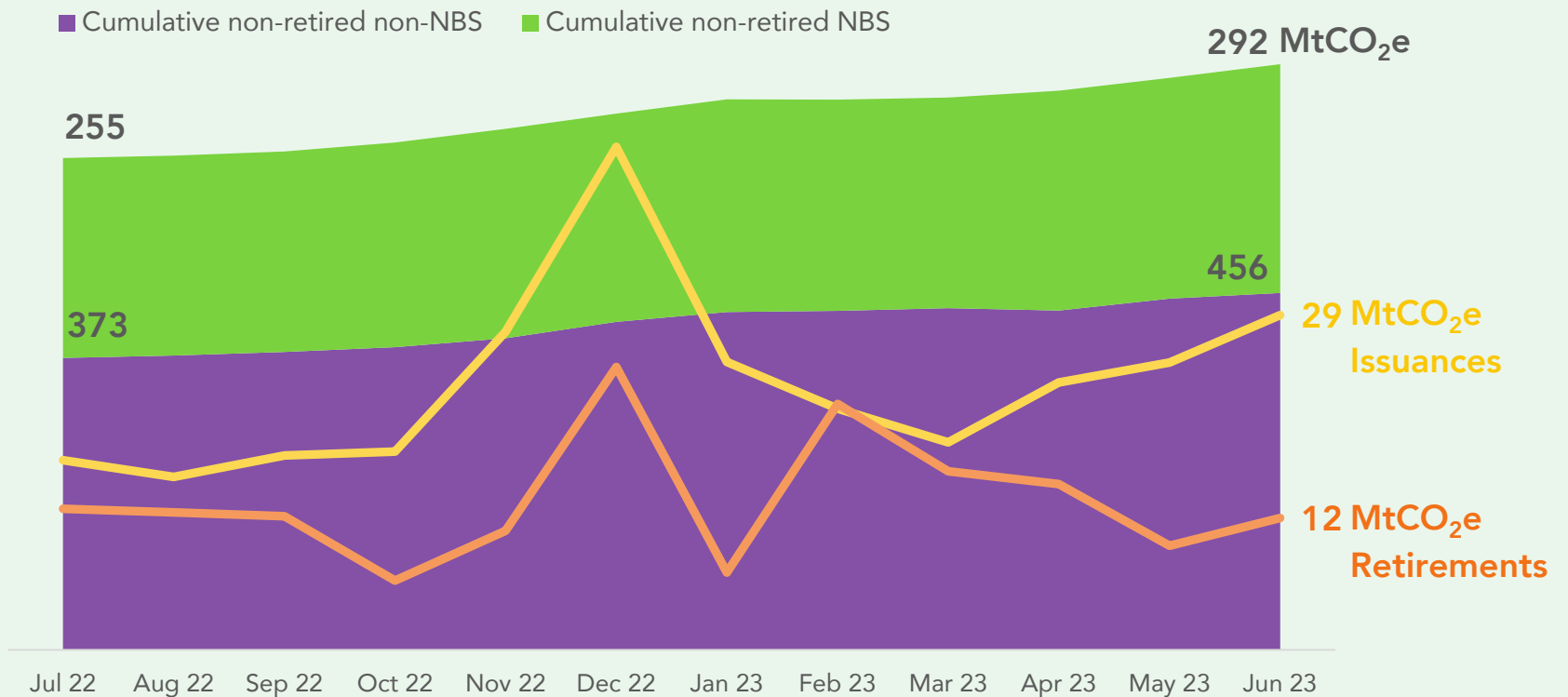
# ROLE OF RENEWABLE ENERGY IS DECLINING



Issuance levels for **renewable energy** projects<sup>1</sup> have **declined back to 2020 levels**, dropping to 39 Mt in H1 2023. This represents a **25% fall** compared to the same period last year. Leading project types include large-scale wind power activities (16 Mt), followed by large-scale hydropower projects (13 Mt) and large-scale solar power projects (6 Mt). Discounted pricing for large-scale renewable energy projects is one explanation behind this trend, which is compounded by supply restrictions caused by activities coming to the end of their fixed-term crediting periods.

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

# VOLUME OF NON-RETIRED CREDITS DEEPENS



**Non-retired VER volumes increased steadily** throughout the first half of 2023, rising from 628 Mt in July 2022 to **748 Mt** a year later. Month-to-month retirement and issuance levels briefly reached the same levels earlier in the year (February 2023), but retirement activity has slowed since while issuance levels have been on the rise. On aggregate, the total carbon credit surplus grew by **63 Mt**.<sup>1</sup>

<sup>1</sup> It should be noted that while retirement levels lag on issuance volumes, the growing carbon credit surplus does not imply that demand for voluntary carbon credits is waning. As more buyers enter forward purchase agreements, a share of the newly issued volumes is likely to be already contracted and, therefore, may never trade on the secondary market.

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2023 H1 OVERVIEW

We welcome you to explore more details about the VCM on our [Dashboard](#), which we update monthly.

For tailor-made advisory, including strategic advisory on the VCM, project-level diligence support, and transaction support, please reach out to [dashboard@climatefocus.com](mailto:dashboard@climatefocus.com).

