

Global Voluntary Carbon Market: Analysis By Value, By Traded Volume, By Credit Retirements, By Credit Issuance, By Project Category, By Type of Project, By Region Size and Trends with Impact of COVID-19 and Forecast up to 2027

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Abstracts

The global voluntary carbon market was valued at US\$2,004.85 million in 2021 and is expected to reach 17.11 billion by 2027. On the other hand, the voluntary carbon market traded volume has reached 298.15 MtCO₂e in 2021 and is projected to grow to 678.56 MtCO₂e by 2027. The annual credit issuance has increased to 399.96 MtCO₂e in 2021, whereas annual credit retirement has increased to 166.65 MtCO₂e. The voluntary carbon market (VCM) enables carbon emitters to compensate for their unabated emissions by purchasing carbon credits produced by projects targeted at removing or reducing greenhouse gas (GHG) emissions from the atmosphere.

In recent years, there has been unprecedented momentum among global corporates to accelerate climate actions, driven by the growing pressure from governments, society, and financial market players. Despite a myriad of concerns around the existing practice of using carbon offsets as part of corporates' environmental strategies, corporate pledges have resulted in explosive growth in demand for voluntary carbon credits. The global voluntary carbon market is determined to grow at a CAGR of 42.91% over the forecasted period of 2022-2027. At the same time, the voluntary carbon market traded volume is expected to grow at a CAGR of 14.69%.

Market Segmentation Analysis:

By Project Category: The report provides the bifurcation of market value, traded volume, credit issuance, and credit retirement based on the project category: Forestry and Land

Use, Renewable Energy, Chemical Process/Industrial Manufacturing, Household/Community Devices, Waste Disposal, Energy Efficiency/ Fuel Switching, Agriculture, and Transportation. In terms of market value, forestry and land use held the major share of the market. From 2020 to 2021 REDD+ (type of forestry and land use projects) volumes rose dramatically, including an increase in the avoided unplanned deforestation project type and an increase in avoided planned deforestation. Afforestation and Reforestation (ARR) projects have also seen tremendous growth in Asia and Latin America & the Caribbean between 2019-2021. The sharp increase in ARR projects in large part is due to developments in the Republic of China.

By Type of Projects: The report provides the bifurcation of voluntary carbon market credit issuances based on the type of projects: Tech-Based Avoidance, Nature-Based Avoidance, Nature-Based Removal, and Tech-Based Removal. In 2021, Tech-based avoidance projects held the highest share of the market. Nature-based avoidance projects are the second largest credit supply category, which includes projects such as improved forestry management and avoided deforestation (REDD+) that protect the natural carbon sinks. The appeal of nature-based solutions includes co-benefits such as increasing biodiversity, economic opportunity for local communities, and promotion of resiliency and climate adaptation.

By Region: In the report, the global voluntary carbon market is divided into six regions: Asia, Latin America, Africa, North America, Europe, and Oceania. Asia accounted for the maximum share of the global market value in 2021. In July 2022, HKEX announced the Hong Kong International Carbon Market Council to develop Hong Kong as an international carbon market and a hub for Asia. Core Climate would provide effective and transparent trading of voluntary carbon credits and instruments, across Asia and beyond. Thus, the market is expected to grow in the coming years.

There has been an increase in participation in Latin American carbon markets due to the expansion of voluntary carbon markets, and ambitious climate goals established globally by governments and private actors, with the hydrocarbon industry leading the energy transition efforts in the region. In the coming years, governments would incentivize low-carbon technologies, such as carbon capture, utilization, and storage (CCUS), to increase the supply of high-quality credits in the region.

Market Dynamics:

Growth Drivers: The global voluntary carbon market has been growing over the past few years, due to factors such as the rising carbon emission, increasing corporate efforts in

carbon offsetting, increase in adoption of net zero targets, increasing demand for natural climate solutions, establishment of CORSIA, etc. Under the 2015 Paris Agreement, nearly 200 countries have endorsed the global goal of limiting the rise in average temperatures to 2.0 degrees Celsius above preindustrial levels, and ideally 1.5 degrees. Reaching the 1.5-degree target would require that global greenhouse-gas emissions are cut by 50% of current levels by 2030 and reduced to net-zero by 2050. As more and more net-zero commitments and nearer-term targets are made, the demand for carbon credits to offset emissions would increase. By enabling this, VCMs could drive a huge increase in funding to climate- and nature-positive investments. This would positively influenced the market growth.

Challenges: However, some challenges are impeding the growth of the market such as as insufficient governance, no standard measurement of quality, etc. Since the lack of governance and unified standards make it difficult for market participants to verify the quality of a given carbon credit, it became a hurdle for market growth.

Trends: The market is projected to grow at a fast pace during the forecast period, due to various market trends like growth in direct air capture (DAC), Article 6 agreement redefining global carbon offset markets, emergence of carbon credit rating agencies, etc. DAC has seen a surge in interest and investment over the past few years and a growing number of companies are entering the space. This is due to the understanding that carbon removal would increasingly be needed to meet national and global climate goal. Technology-based removal technologies such as direct air capture are expected to play an increasingly large role in current and future voluntary market activity.

Impact Analysis of COVID-19 and Way Forward:

The global voluntary carbon market has experienced positive growth during the pandemic. In 2020, airlines rolled back their purchases to match lower emissions, whereas broader corporate demand for voluntary carbon offsets was increasing. Then, as the year progressed, so did the number of carbon-neutral pledges from individual companies like Amazon and Microsoft. In the post-COVID era, factors such as government support to reduce greenhouse gas emissions are anticipated to drive market growth.

Competitive Landscape:

The global voluntary carbon market is fragmented. The key players in the global voluntary carbon market are:

NRG Energy, Inc. (Green Mountain Energy)

Just Energy Group Inc. (TerraPass)

Ambipar Group (Bio?lica Ambipar Environment S.A.)

South Pole

3Degrees Group, Inc.

EcoAct

Aera Group

ClimeCo

ClimatePartner

First Climate AG

Vertis Environmental Finance

NativeEnergy Inc.

In 2021, Verra held the highest share of the credit issued, followed by California Air Resources Board. In 2022, South Pole announced that the company joined new Forest Stewardship Council (FSC) Climate Coalition Initiative. FSC aims to ensure that Indigenous Peoples, smallholders, and forest stewards benefit from participating in certification and the growing carbon market. Whereas, 3Degrees announced the launch of new climate tech advisory services, which complement the company's existing suite of climate advisory and implementation services.?

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