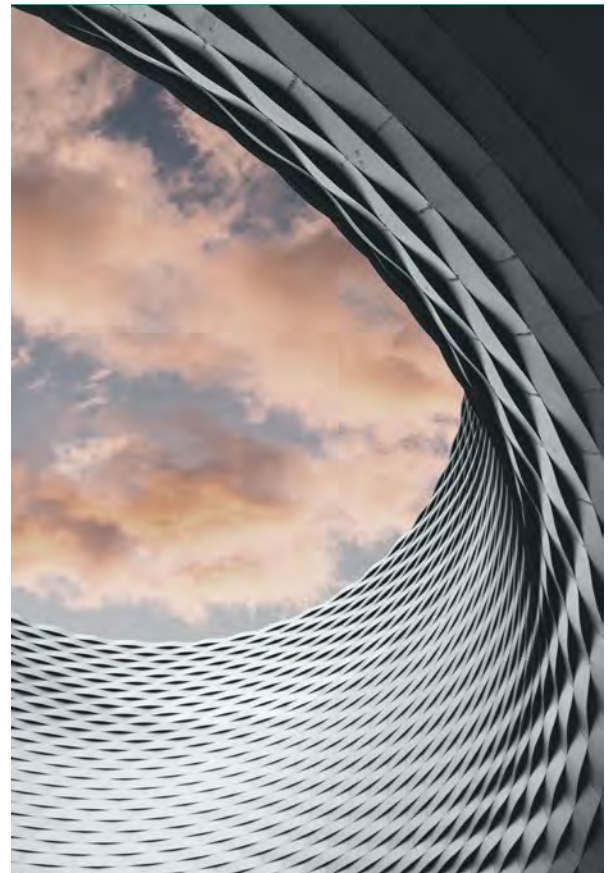


The Voluntary Carbon Market **Explained**

Chapter 7



Introduction

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Chapter 7: What is the role of carbon standards in the voluntary carbon market?

Carbon standards are central to the operation of the voluntary carbon market (VCM). Carbon standards—or greenhouse gas (GHG) crediting programs—provide the methodologies, rules, and requirements that VCM activity developers must follow to certify and issue carbon credits and facilitate the trade in [carbon credits](#). Carbon standard organizations govern carbon standards and the issuance of carbon credits.

What are carbon standards?

A carbon standard refers to the complete set of rules, procedures, and methodologies according to which certified [carbon credits](#) are generated and issued. Carbon standards are developed and governed by standard organizations—typically international non-governmental organizations (NGOs) that consist of a standard-setting arm, a regulatory arm, and a validation and verification system usually outsourced to third parties (See Figure 7.1). Carbon standard organizations develop carbon standards and establish the monitoring, reporting, validation, and verification procedures that VCM activities must follow for the standard to issue carbon credits. Carbon standard organizations also

contract or manage registries that track the issuance and transfer of carbon credits. Governments can also develop or support the development of VCM carbon standards, such as the [Woodland Carbon Code in the United Kingdom](#) and the [Thailand Voluntary Emission Reduction Program](#).

VCM activity developers apply the rules, procedures, and methodologies developed and administered by carbon standards. Governments apply the methodologies in the case of government-sponsored or jurisdictional programs. Developers must demonstrate compliance with the rules and methodologies through the documentation they submit to the standard and to standard-approved auditors (often called validation and verification bodies or VVBs). Developers have some flexibility to choose which methodology best aligns with the activities they are developing and will best meet the needs of beneficiaries of the activity. Some carbon standards provide the option for developers to propose new methodologies or adapt methodologies from other standards.

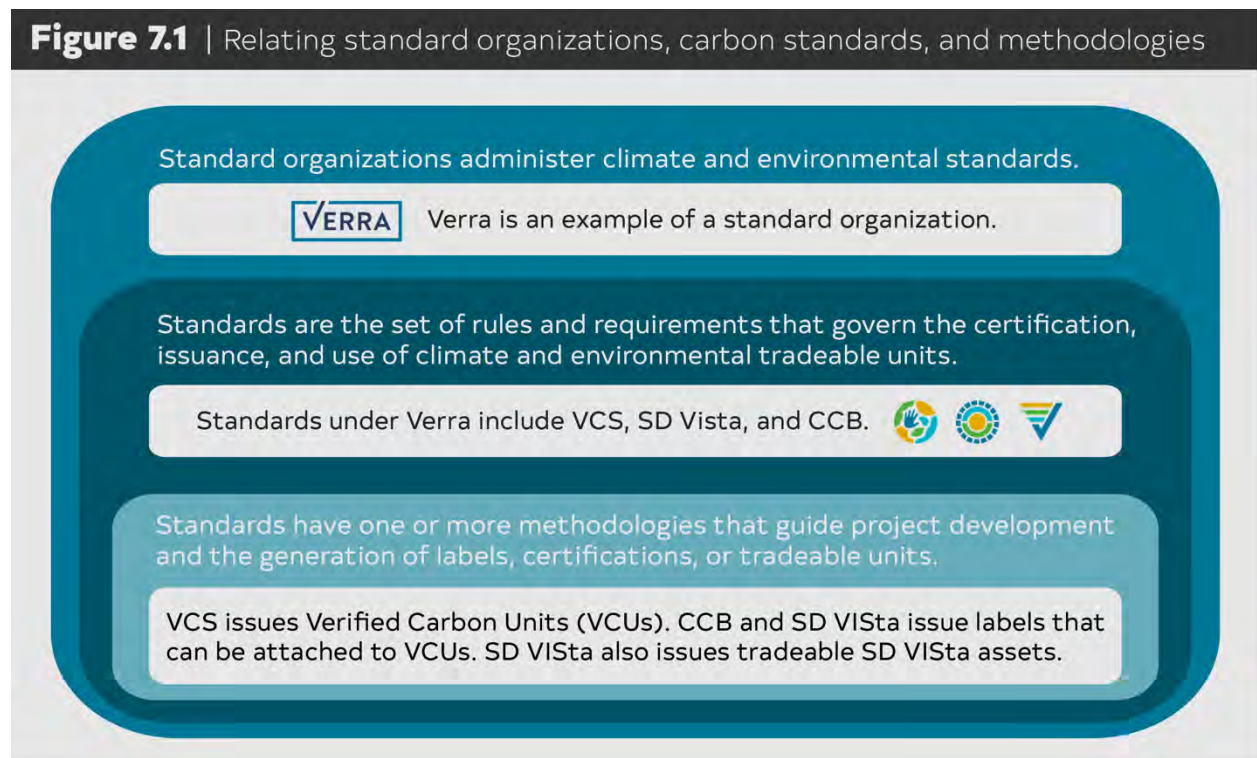
By developing and administering standardized procedures for crediting GHG emission reductions and removals, standard organizations act as the regulators of the VCM. Standard organizations safeguard the **quality** of VCM carbon credits and provide credibility to the **baseline-and-credit system** on which the VCM relies. Standard organizations with good governance have clear rules and requirements that are regularly updated, mechanisms for stakeholder consultation and grievances, specific environmental and social safeguards, robust methodologies for determining baselines and project contributions, and requirements for independent review of projects by competent, third-party auditors.

Carbon standards both certify VCM activities and facilitate the trade of carbon credits. To obtain

certification of emission reductions and removals and be **issued credits** to trade, VCM activities must: comply with carbon standards' processes, rules, requirements, and safeguards; apply methodologies approved by the standards; and provide evidence of compliance, which is generated by activity managers and reviewed by an independent third-party auditor. Carbon standards issue carbon credits into registries. Registries track all credits generated and retired, facilitate the transfer and sale of tradable credits, and trace transactions between buyers and sellers.

Figure 7.1 shows the relationship between standard organizations, standards, and methodologies. A standard organization like Verra manages one or more standards. In the case of Verra, the standards it manages include the Verified

Figure 7.1 | Relating standard organizations, carbon standards, and methodologies



Carbon Standard (VCS), Sustainable Development Impact Standard (SD VISta), and Climate, Community, and Biodiversity (CCB) Standards. Standards govern methodologies, which determine how VCM activities are developed and how VCM carbon credits are issued.

What are the main carbon standards in the VCM?

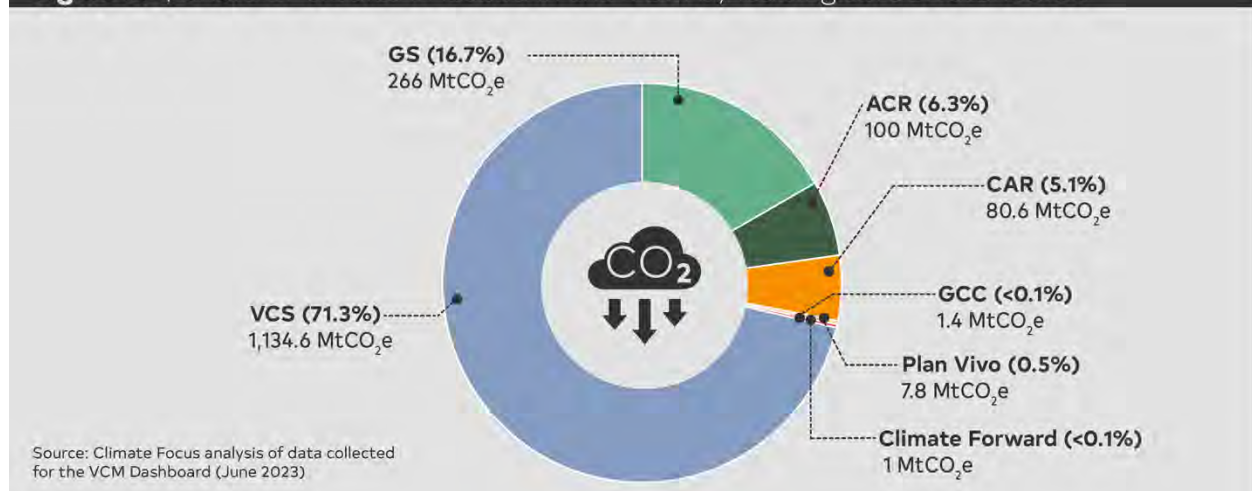
The carbon standards that have issued the most carbon credits (since 2002) are the VCS, the Gold Standard for the Global Goals (GS4GG), ACR, and the Climate Action Reserve (CAR). As shown in Figure 7.2, VCS and GS are the major standards worldwide, issuing 71.3% and 16.7% of credits, respectively. ACR (6.3% of credits) and CAR (5.1% of credits) are the third and fourth largest standards and are mainly active in North America.

There are smaller standards that issue small shares of credits in the VCM. Plan Vivo (PV, 0.5% of credits) certifies smallholder and

community projects in developing countries, with 28 projects actively issuing credits as of July 2023. Climate Forward and Global Carbon Council (GCC) have each issued less than 0.1% of credits in the VCM. There are other small and emerging standards that have issued few or no credits. In addition, there are various other context-specific crediting mechanisms, including voluntary domestic carbon standards such as those in California, Thailand, and the United Kingdom.

Certain carbon standards certify and issue carbon credits for government-sponsored national or large sub-national programs for Reducing Emissions from Deforestation and Degradation Plus (REDD+). The Architecture for REDD+ Transactions' The REDD+ Environmental Excellence Standard (ART/TREES) is a new standard, launched in 2020. ART/TREES formulates and administers standardized procedures to certify large volumes of emission reductions and removals from jurisdictional-scale REDD+. The first

Figure 7.2 | Share of credits in issued in the VCM by leading carbon standards



Letters of Intent for transactions involving jurisdictional credits certified under ART/TREES were signed in November 2021. As of August 2023, there were 18

programs in the [ART/TREES registry](#). [Guyana](#) is the first and, so far, only jurisdiction to have been issued ART/TREES credits.

Table 7.1: Carbon standards at a glance

Standard organization	Standard	Market Volume (M = million)	Name of credits (Representing 1 tCO ₂ e)	Geographical Scope	Sectoral Scope
Verra	Verified Carbon Standard (VCS)	1,134.6 M credits, 71.3% share	Verified Carbon Units (VCUs)	2,118 registered projects in 85 countries. VCS is dominant in developing countries.	Covers all project classes.
Gold Standard Foundation	Gold Standard for the Global Goals (GS4GG)	266 M credits, 16.7% share	Verified Emission Reductions (VERs)	2,195 registered projects in 76 countries. Credits are purchased especially by buyers in the European Union.	Covers most project classes but excludes project-level REDD+ . After 2025, will only cover credits backed by corresponding adjustments .
Winrock International	ACR	100 M credits; 6.3% share	Emission Reduction Tons (ERTs)	83 registered projects, primarily in the United States, with a few projects in Brazil, Mexico, Canada, France, Nicaragua, Bolivia, and El Salvador.	Covers industrial processes; land use, land use change and forestry; carbon capture; waste.

Climate Action Reserve	Climate Action Reserve (CAR)	80.6 M credits, 5.1% share	Climate Reserve Tonnes (CRTs)	206 registered projects, primarily in the United States, with some activities in Mexico. CAR serves as the Offset Project Registry for California's Cap-and-Trade Program . CAR is also running a pilot Emissions Trading System in Mexico from 2020-2023.	Covers agriculture and forestry; energy; waste; and non-CO2 GHG abatement.
Plan Vivo Foundation	Plan Vivo	7.8 M credits, 0.5% share	Plan Vivo Certificates (PVCs)	28 registered projects in 19 countries. Projects are primarily developed with Indigenous Peoples and smallholders in developing countries.	Covers smallholder and local-community forestry and agriculture.
Global Carbon Council (GCC)	GCC Program	1.4 M credits, <0.1% share	Approved Carbon Credits (ACCs)	22 registered projects in 3 countries. GCC emphasizes development in the Middle	Covers energy; industrial processes; construction; transport; mining/mineral production ;metal

				East and North Africa.	production; forestry, agriculture; waste; carbon capture and storage
Climate Action Reserve (CAR)	Climate Forward	1.0 M credits, <0.1% share	Forecasted Mitigation Units (FMUs)	9 registered projects in the US and Zambia.	Covers energy; industrial processes; forestry

Carbon standards vary in their approaches, methodologies, and requirements. The four largest standards (i.e., VCS, GS, ACR, and CAR) all demonstrate good governance and offer methodologies for VCM activities in a range of sectors (e.g., nature-based solutions (NbS), energy, and industry). These standards provide robust rules and requirements for developers and auditors. They impose environmental and social safeguards for activities to receive credits, including requirements that VCM activities avoid harms to biodiversity and local ecosystems; follow all national and international laws and regulations; and conduct consultations with local stakeholders, including Free, Prior and Informed Consent (FPIC) processes when working with Indigenous Peoples.

There are also standards that certify contributions of VCM activities to Sustainable Development Goals (SDGs). SDG standards complement carbon standards by adding additional certifications for projects that generate economic,

social, biodiversity or other benefits in addition to climate change mitigation. These standards establish requirements and methodologies for designing, monitoring, verifying, and validating contributions to SDGs. Some SDG standards offer sustainable development labels to attach to carbon credits that demonstrate SDG benefits, and some standards allow projects to issue sustainable development credits that can be traded independently from carbon credits. VCM standard organizations that provide labels for sustainable development benefits include Verra, which administers the CCB standard and the SD VISTa label, and the Gold Standard Foundation, which administers the GS4GG. SD VISTa and GS4GG also issue tradable credits that represent project contributions to the SDGs.

The certification of SDG benefits is particularly relevant for community-based and NbS VCM activities. Due to their potential to offer benefits beyond emission removals and climate change

mitigation, NbS credits are a popular project class. VCM carbon standards have approved methodologies to develop and generate credits from NbS activities under each of the main [NbS categories](#)—Forestry, Agriculture, and Wetlands. The desire to certify the additional benefits of NbS projects has played an essential role in the development of labels certifying strong social-ecological benefits and contributions to SDGs.

How do governments and carbon standard organizations interact?

Carbon standards define the rules that lead to the generation of [carbon credits](#) in the VCM. However, as governments seek to enhance VCM impact and policy alignment, interaction between governments and standard organizations is expected to grow. [Governments](#) benefit from collaboration with private standard organizations because standards provide technical expertise for robust GHG accounting and management of carbon offset projects. Governments may benefit from such knowledge when [they define Cooperative Approaches](#) under Article 6.2 of the Paris Agreement. They may also accept, integrate, and scale VCM activities in the context of larger sectoral Cooperative Approaches.

To access VCM-based finance directly, governments can generate and market VCM carbon credits.

Governments that implement national programs, such as [REDD+ jurisdictional programs](#), sell credits generated using methodologies provided by standards. Governments can also promote the integration of VCM projects into national systems to attract investments into projects. integration can preserve and strengthen the environmental integrity of projects. For example, in the case of [REDD+](#), standards such as Verra’s Jurisdictional and Nested REDD+ (JNR) Framework or [ART/TREES](#) promote the integration of projects into larger-scale programs.

Another form of interaction is governments’ use of VCM carbon standards to support domestic climate regulations, with some governments opting for private standards in their public rules. For example, the US State of [California](#) accepted offsets generated by voluntary standards (CAR and ACR) and eventually delegated the creation of its mandatory carbon market to the governing body of the CAR. Countries such as [Colombia](#) and [South Africa](#) recognize credits from GHG carbon crediting programs (i.e., VCS) for liable entities to meet some of their carbon tax obligations and build on the architecture of private standards. The Carbon Offsetting and Reduction Scheme for International Aviation ([CORSA](#)) also allows liable entities to use VCM carbon credits that meet certain [eligibility criteria](#).

Governments may increase interactions with standards to accelerate implementation of the [Paris Agreement](#) and to encourage voluntary action. Voluntary carbon finance can be used to fill mitigation gaps for sectors not covered in Nationally Determined Contributions (NDCs) or to help countries to meet mitigation targets for sectors that are covered by NDCs. Proactive engagement with standards can attract investments into national mitigation opportunities. Governments can increase the availability of credits by permitting more types of activities and can drive the production of [high-quality credits](#) that attract higher prices. With a larger, more diversified carbon market, governments can rely on greater liquidity to attract finance that supports meeting climate goals.

Further reading

Greenhouse Gas Management Institute & Stockholm Environment Institute. (n.d.). Carbon Offset Programs. Carbon Offset Guide. Retrieved September 28, 2023, from <https://www.offsetguide.org/understanding-carbon-offsets/carbon-offset-programs/>

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