

ECOSYSTEM MARKETPLACE INSIGHTS BRIEF

The Only Constant is Change

State of the Voluntary Carbon Markets 2020 Second Installment Featuring Core Carbon & Additional Attributes Offset Prices, Volumes and Insights

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December 2020

2020 EM Strategic Supporters:



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Please cite this work as follows: Forest Trends' Ecosystem Marketplace. *The Only Constant is Change. State of the Voluntary Carbon Markets 2020, Second Installment Featuring Core Carbon & Additional Attributes Offset Prices, Volumes and Insights*. Washington DC: Forest Trends Association, December 2020.

Acknowledgments

This report is a compilation of the insights of a wide range of individuals across several continents. It would not be possible without the hundreds of individuals who shared critical information about their organizations.

This report is publicly available thanks to the generous financial and institutional contributions from our 2020 Strategic Supporters: 3Degrees; American Carbon Registry, an enterprise of Winrock International; Arbor Day Foundation; C-Quest Capital; Cool Effect; Livelihoods Fund; MOSS.Earth; Vertis Environmental Finance; and Verra.

A number of people offered insights on market dynamics and regional trends through conversations with our team. We extend our grateful thanks to: David Antonioli, Eron Bloomgarden, Nick D'Alleva, Kathrin Dellantonio, Antoine Diemert, John Ehrmann, Silvia Gomez Caviglia, Mary Grady, Michael Greene, Kelley Hamrick, Alex Hanafi, Stephanie Harris, Scott Hernandez, Nadia Kähkönen, Edit Kiss, Dee Lawrence, Sarah Leugers, Marco Magini, Jeremy Manion, Sarah Megahed, Julie Nash, Ken Newcombe, Annie Petsonk, Eva Shoof, Jonathan Shopley, Chris Stephenson, Ben Stuart, Anne Thiel, Kevin Townsend, Rene Velasquez, and Lisa Walker.

Graphics by Forest Trends Association.

Introduction

Every year since 2006, [Ecosystem Marketplace](#) (EM), an initiative of Forest Trends, has run its globally recognized EM Carbon Survey platform to track what would otherwise be an opaque voluntary carbon market. This work has served as a consistent and comprehensive price discovery mechanism, while at the same time shedding light on fundamental questions about market dynamics, supply, demand, and market actors.

Voluntary carbon markets are poised to expand dramatically in 2021 and beyond, driven by a rapid acceleration of net zero commitments from corporations and reflected in bold new initiatives such as the Institute of International Finance (IIF)’s Taskforce on Scaling Voluntary Carbon Markets (referred to herein as “the Taskforce”), headed by former Bank of England Governor Mark Carney. Indeed, this growth began in 2017, when prices and volumes simultaneously began to diverge widely by category, type, vintage, standard, and location (Table 1). This has led to a renewed interest in deeper, more detailed and timely data on voluntary carbon markets, which we will explore in this document, the second installment of the *State of the Voluntary Carbon Markets 2020* (SOVCM 2020).

The first SOVCM 2020 installment, “Voluntary Carbon and the Post-Pandemic Recovery,” summarized overall price and volume figures compiled from confidential responses provided by a global network of 152 project developers, investors, retailers, and brokers to the 2020 EM Carbon Survey, and a series of interviews with roughly two dozen participants conducted in August and September of 2020.¹

Table 1. Overview of the Voluntary Carbon Markets, 2017-2019

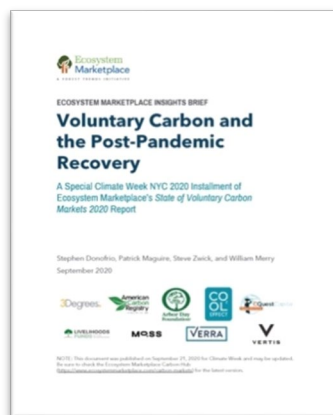
	2017			2018			2019		
	VOLUME MTCO ₂ e	AVERAGE PRICE	VALUE	VOLUME MTCO ₂ e	AVERAGE PRICE	VALUE	VOLUME MTCO ₂ e	AVERAGE PRICE	VALUE
FORESTRY AND LAND USE	16.6	\$3.4	\$63.4M	50.7	\$3.2	\$171.9M	36.7	\$4.3	\$159.1M
RENEWABLE ENERGY	16.8	\$1.9	\$31.5M	23.8	\$1.7	\$40.9M	42.4	\$1.4	\$60.1M
WASTE DISPOSAL	3.7	\$2.0	\$7.4M	4.5	\$2.2	\$10.0M	7.3	\$2.5	\$18.0M
HOUSEHOLD DEVICES	2.3	\$5.0	\$11.8M	6.1	\$4.8	\$29.5M	6.4	\$3.8	\$24.8M
CHEMICAL PROCESSES/ INDUSTRIAL MANUFACTURING	2.6	\$1.9	\$4.9M	2.5	\$3.1	\$7.9M	4.1	\$1.9	\$7.7M
ENERGY EFFICIENCY/FUEL SWITCHING	1.1	\$2.1	\$3.3M	2.8	\$2.8	\$7.8M	3.1	\$3.9	\$11.9M
TRANSPORTATION	0.1	\$2.9	\$0.2M	0.3	\$1.7	\$0.5M	0.4	\$1.7	\$0.7M

Notes: This figure does not include responses that didn’t provide price data.

Key Findings

- EM data shows a wide variation in average offset prices and volumes transacted by project type, region, standard, co-benefits, among other ‘additional attributes’ (Page 9). This reflects the broad, and growing, diversity in buyer preferences for achieving climate and sustainability goals, and in their general willingness-to-pay for voluntary offsets.
- Market participants are skeptical about creating an exchange-driven “core” price on carbon, driven more by a concern that overall credit quality will suffer without accurate pricing for the wide variety of additional attributes that voluntary carbon markets credits exhibit, which many buyers demand, as cheaper credits without co-benefits will have an advantage.
- Markets participants repeatedly expressed the importance of having reliable data on price variances due to such attributes. Such data will be increasingly useful if the Taskforce succeeds in generating a mechanism for creating a core carbon price.
- Demand for voluntary carbon offsets has fluctuated in response more so to climate awareness and willingness to pay for reductions rather than to the current structure of voluntary markets. At the same time, there is a consensus that current structures must brace for an influx in demand to scale up without sacrificing quality.

Figure 1. State of the Voluntary Carbon Markets Installment #1



Download now:

www.ecosystemmarketplace.com/carbon-markets

¹ "Voluntary Carbon and the Post-Pandemic Recovery. State of Voluntary Carbon Markets Report, Special Climate Week NYC 2020 Installment," (2020), Ecosystem Marketplace, 21 September 2020. Accessed via the Ecosystem Marketplace Carbon Hub: <https://www.ecosystemmarketplace.com/carbon-markets/>.

² This includes hundreds of organizations, including project developers, retailers, traders, brokers, platforms, among others. To learn more about our methodology see Box 1 of the "2019 State of the Voluntary Carbon Markets" available here: <https://www.ecosystemmarketplace.com/carbon-markets/>.

About this Installment

Ecosystem Marketplace's *State of the Voluntary Carbon Markets* reports offer insights into key trends and developments of voluntary carbon markets, supported by aggregated and anonymized EM Carbon Survey respondent data and interviews. Building upon the first installment of SOVCM 2020, this second installment presents additional EM data and analysis in light of recent recommendations from the Institute of International Finance's (IIF's) Taskforce on Scaling Voluntary Carbon Markets (the Taskforce) to provide insights into:

- How voluntary carbon offset market participants price both core carbon and additional attributes (e.g., project types, co-benefits, location, vintage); and
- The ways EM data can inform this price discovery going forward.

It is important to note that although we do allude to the Taskforce recommendations, this installment is neither an answer to those recommendations nor an effort to create a competing narrative, but rather an effort to provide additional evidence and context with which to evaluate the Taskforce's draft recommendations.

Ecosystem Marketplace opened the 2020 EM Carbon Survey in March 2020 to its worldwide network of EM Market Participants,² just as the world went into lockdown due to the COVID-19 pandemic. As a result, EM extended the survey submission deadline the end of August, the same month that EM's interviews with market experts commenced.

It should be noted that this was roughly the same timeframe within which the Taskforce first convened to "draw up a roadmap to build the market infrastructure needed for a fully functional voluntary market," and later released its Public Consultation Document in November 2020.

We believe the Taskforce's and EM's approaches are complementary. There is some overlap in the participants whose insights contributed to both publications, but there are also marked differences. Specifically, EM conducts outreach to gather survey responses and input purely from within the voluntary carbon markets, aiming to draw on all known participants to understand how markets function currently. EM uses a combination of hard data and subjective interviews to understand the current state of the voluntary carbon markets. The Taskforce, on the other hand, aims for broader participation from financial markets and civil society, so it draws on fewer participants from inside the carbon markets but more participants from the larger world of financial markets and environmental nongovernmental organizations (NGOs). Its goal has been to gather input from a variety of experts to identify ways of scaling voluntary carbon markets in line with the Paris Climate Agreement.

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Acronyms & Abbreviations

ACR	American Carbon Registry
CCB	Climate, Community & Biodiversity
CCX	Chicago Climate Exchange
CORSIA	Carbon Offsetting and Reduction Scheme for International Aviation
EM	Ecosystem Marketplace
EU ETS	European Union Emissions Trading Scheme
GEO	Global Emissions Offset
ICE	Intercontinental Exchange
IIF	Institute of International Finance
LIBOR	London Interbank Offered Rate
MtCO₂e	Million tons of carbon dioxide equivalent
NGO	Nongovernmental organization
OTC	Over-the-counter
SDGs	Sustainable Development Goals
SOVCM	State of Voluntary Carbon Markets
Taskforce	Taskforce on Scaling Voluntary Carbon Markets
VCS	Verified Carbon Standard

Overview: How to Grow Voluntary Carbon Markets to Support the Paris Goals?

The simple fact is that humankind must slash net anthropogenic greenhouse-gas emissions by 50 percent by 2030 and reduce them to net zero by 2050 to meet the Paris Agreement's 1.5°C target. In addition to direct emission reductions, this will require, according to the Taskforce, at least a 15-fold scale-up of voluntary offsetting by 2030 in order to meet expected demand. Therefore, voluntary carbon offsetting must increase dramatically, without sacrificing quality.

The operant word is *net*. Carbon credits can help meet the 2030 milestone by financing technologies and practices that deliver the deepest, most cost-effective reductions over the shortest time horizon through offsets, while supporting finance for technologies that remove greenhouse gasses in the long term. This can include both emissions reductions (such as avoided deforestation) and removals (such as reforestation), though this has been a point of debate within the Taskforce. Some members felt the Taskforce should emphasize removals over reductions immediately. In the end, a consensus emerged that both should be emphasized in the present, with removals taking on a greater role over time.

EM's interviewees welcomed the Taskforce's goals of increasing demand for voluntary offsets and enabling scaling without sacrificing quality, but some feared a danger of overemphasizing marginal, or even counterproductive, structural changes over broader awareness-raising and education about voluntary markets. Several pointed out, rightly, that demand has fluctuated in line with broader climate awareness, and many argued that demand has been hampered by the lack of principles and guidance for offsetting in corporate claims by voluntary initiatives that guide and incentivize corporate carbon management strategies. Also, many identified the need to address a persistent lack of understanding of carbon markets among media and corporate buyers, as well as mixed signals from NGOs.

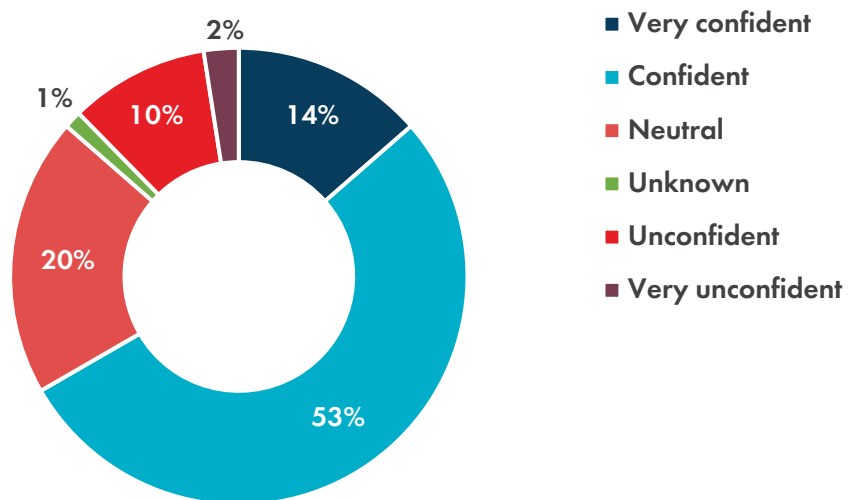
The State of the Current Voluntary Carbon Markets Demand

Encouragingly, EM data shows the markets are already growing substantially, and have been since 2017. The number of companies making climate-neutral or net-zero pledges has doubled during the COVID-19 pandemic. Total reported transaction volume topped 104 MtCO₂e in 2019 (the most recent year for which total volume data is available). This is an increase of 6 percent from the 2018 total transacted volume of 98.4 MtCO₂e.³ Further, 67 percent of the 2020 survey respondents that provided their confidence level indicated that they were "very confident" or "confident" in the voluntary carbon market, with strong or increasing demand being a leading factor (Figure 2).⁴

³ See installment 1 of the SOVCM 2020 <https://www.ecosystemmarketplace.com/carbon-markets/>.

⁴ "Strong" or "Increasing" Demand was cited as the reason for reporting outlook as Very Confident/Confident; 35 out of 48 total reasons for their confidence in the market.

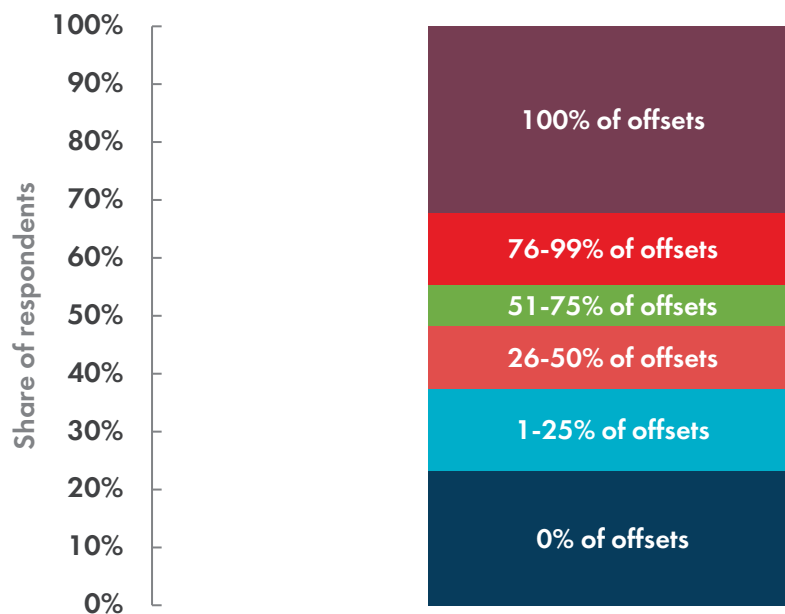
Figure 2. Ecosystem Marketplace Carbon Survey Respondents' Confidence Level in the Voluntary Carbon Market



Note: Data compiled from 81 total respondents to this question.

Source: Forest Trends' Ecosystem Marketplace.

Figure 3. Percentage of Offsets Transacted in 2019 with a Buyer Pre-Issuance



Note: Data compiled from 58 total respondents to this question.

Source: Forest Trends' Ecosystem Marketplace.

Securing project financing has been a long-standing barrier to offset project development. However, steadily growing demand, coupled with increasing forward market transactions, can help to overcome this barrier. Figure 3 depicts the share of project developers who responded to the EM Carbon Survey question on the percentage of their credits that had buyers identified prior to issuance. For example, the top bar shows that 31 percent of project developers said they had identified a buyer for 100 percent of their credits prior to issuance. In fact, 74 percent of respondents indicated that they had buyers lined up for some portion, if not all, of their carbon credits before the credits were issued. This indicates that the supply side is receiving strong demand signals. It also tracks with what EM has long found: that credits are typically held back from issuance until there is a buyer identified. This can also be seen as a positive signal that suppliers are more confident that demand is growing as 26 percent of respondents had credits issued without having a buyer in advance.

History Repeating: Market Structure and Past Trends

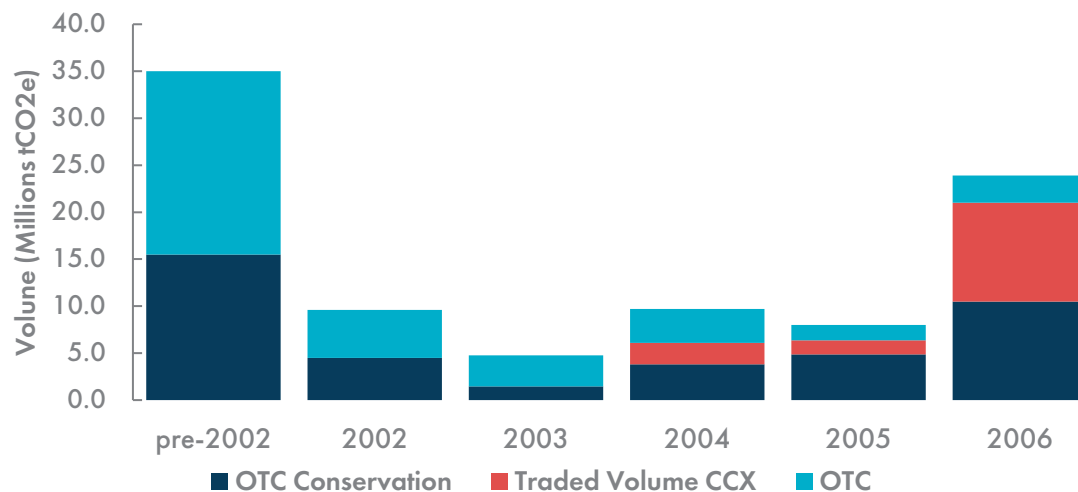
Many of the “new” market challenges coming to light now have actually been with us from the start of carbon markets and even contributed to their evolution, so it makes sense to look back on how we got to where we are.

Voluntary carbon markets date back to 1989 and the Chicago Climate Exchange (CCX), a pioneering electronic spot and futures market, which launched out of its design phase in 2003 as a voluntary greenhouse gas emission reduction program. CCX established a market-based price for reducing emissions of carbon and other greenhouse gases with its subset of transacted credits, termed “Carbon Financial Instruments.” Electronic trading of compliance credits began with the 2005 launch of the European Union Emissions Trading Scheme (EU ETS). Still, the over-the-counter (OTC) market for voluntary offsets was a mystery when it came to reliable data on transactions.

In 2006, Ecosystem Marketplace aimed to solve this mystery, and the annual *State of the Voluntary Carbon Markets* reports were born. EM worked with market participants across the environmental and finance communities to identify the types of data needed to understand the health and efficacy of voluntary carbon markets. This resulted in the development of a detailed survey for project developers and intermediaries (now, the EM Carbon Survey), which focuses on the underlying details of transactions such as project type, location, standards, vintage, among others (i.e., what the Taskforce calls “additional attributes”). Ecosystem Marketplace utilized the extensive Forest Trends network to identify all known participants. The first report, *State of the Voluntary Carbon Markets 2007: Picking Up Steam*, offered unprecedented insight into the size, depth, and complexity of voluntary carbon markets.

SOVCM 2007 (Figure 4) revealed an extensive OTC market driving broader and more complex reductions than were visible on exchanges. While some in the OTC world used CCX’s exchange-generated prices as a real-time barometer of market strength, there was little correlation between CCX prices and global voluntary carbon prices. CCX closed in 2010, leaving the SOVCM reports as the only publicly available source of price data on the worldwide voluntary carbon markets.

Figure 4. Historically Traded Volumes in the Voluntary Carbon Market, pre-2002 to 2006



Source: Forest Trends' Ecosystem Marketplace. *State of the Voluntary Carbon Markets 2007: Picking up Steam*. Washington DC: Forest Trends, 2007.

In the intervening decade, SOVCM reports – which are archived on the Ecosystem Marketplace Carbon Hub⁵ – chronicled a constantly evolving marketplace, with some projects designed around commoditized technologies like wind turbines and others supporting site-specific GHG removal/sequestration strategies, especially in the forestry and land-use sector. As a result, parts of the voluntary markets resemble commodity markets, with standardized emission-reduction outcomes, while other parts resemble real-estate markets, with site-specific variables such as biodiversity conservation co-benefits or livelihood benefits for local communities or indigenous peoples.

Market users have long signaled a desire for near real-time pricing and more regular updates from EM. We've noticed a shift in just the past couple of years as the 2020 survey garnered data from 152 respondents – a 24 percent increase from 2019 and more than double the original 70 respondents in 2007. In addition to this increase in respondents, many said that the growing demand for voluntary carbon credits would make it worthwhile to share data more frequently.

Nearly all respondents reporting to Ecosystem Marketplace in 2020 transacted credits primarily OTC. As the Taskforce's Recommended Action 5 ("Build or Utilize Existing High-Volume Trade Infrastructure") acknowledges the value and opportunity for both exchange-traded and OTC, EM will be working with partners and EM Carbon Survey respondents – both existing and new – to increase the frequency of market surveying and interviewing for key data and sentiments. This would contribute the necessary inputs to establish a global reference price for voluntary carbon credits.

⁵ <https://www.ecosystemmarketplace.com/carbon-markets/>

Core Plus Additional Attributes: The Taskforce’s Big Ask

The Taskforce published its first public consultation document on November 10, which was after EM had conducted its post-survey interviews on which this installment is based. The Consultation Document contains 17 recommendations spread among six topics, and the IIF encouraged all market participants to submit feedback by December 10.

The recommendations are deep and detailed, ranging from the creation of futures contracts to the implementation of advanced data structures. We will not attempt to summarize the entire consultation document here, as it is readily available online and quite accessible. For the purposes of this document, the most relevant recommendation is the creation of “Core Carbon Principles” to be used as the basis for establishing a carbon credit reference price on which transactions can be structured (Figure 5).

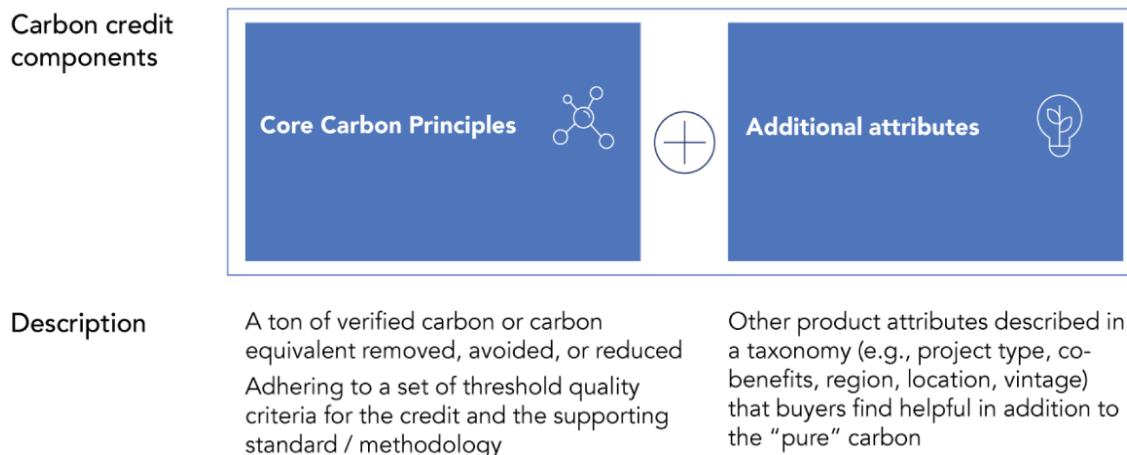
This is a common practice in financial markets, especially those related to commodities, where exchange-traded instruments – such as futures contracts built around specific baskets of interest rate products or bushels of corn meeting agreed-on grades and delivery points – are traded on a government regulated exchange to generate a reference price, which in turn is used to set or negotiate prices in other grades or locations. These other grades and locations can result in either a premium or discount to the reference price.⁶

The Taskforce believes this will work in emission reductions for an obvious reason: a ton of greenhouse gas has the same impact on climate no matter where it is emitted, making its elimination the most commoditized product on the planet -- in theory. Further, the Taskforce recognizes that offset prices are often driven by a combination of attributes beyond their emission reductions or removals, and the “core carbon” concept aims to enable the pricing of these attributes separately from the emission reductions or removals it generates.

⁶ <https://www.cmegroup.com/content/dam/cmegroup/rulebook/CBOT/I/10.pdf>

Figure 5. Core Carbon Principles and Additional Attributes as depicted in the Taskforce on Scaling Voluntary Carbon Markets

EXHIBIT 21: DEFINITION OF CORE CARBON PRINCIPLES AND ADDITIONAL ATTRIBUTES



Source: Taskforce on Scaling Voluntary Carbon Markets, Consultation Document, November 2020.

Box 1. EM Data on Volumes and Prices on Core Carbon and Additional Attributes

EM has long tracked the volumes and prices of carbon offsets, as well as these additional attributes from a global network of hundreds of market participants reporting tens of thousands of current, historical, and future offset transactions. This uniquely positions EM to be able to determine how prices vary with respect to their underlying “additional attributes.”

The variety of EM Data additional attributes, aggregated from anonymized EM Carbon Survey Participants, include project region & location, project category & type, vintage, seller type, seller location, primary vs secondary market, buyer type, buyer location, contract delivery structure (e.g., spot, futures), standard, and co-benefits. This SOVCM 2020 Installment 2 provides average prices and volumes for a sample of these attributes. The remaining additional attributes may likely be featured in future installments.

Please contact carbonsurvey@forest-trends.org if you have specific data requests.

Box 2. Spotlight on Reference Prices and Core Carbon Prices

Why Reference Prices Matter: Lessons from Commodity Markets

There is abundant precedent for providing a clear reference price in everything from potatoes, menthe oil, and cardamom to corn, wheat, and soybeans in countries as diverse as India and the United States.

India, for example, introduced futures trading in 2003, enabling centralized exchanges to provide national reference prices for commodity markets that had previously been fragmented and opaque. As a result, farmers were able hedge against price volatility and borrow money at more favorable rates, while the gap between wholesale and retail prices narrowed. This meant farmers could sell at higher prices and consumers could buy at lower prices – a boon to everyone except middlemen, who were forced to either adapt by offering value-added services or perish.¹

Core Carbon Price: Is it Doable?

Not all markets lend themselves to reference pricing, and skeptics say voluntary carbon is one of these. To begin with, the name is a misnomer. Although carbon dioxide equivalent serves as a measure of greenhouse-gas emissions, each gas traps heat differently. It's possible to see core prices for reductions in different types of gas – or for different categories of project, although the consultation document recommends treating project types as additional attributes.

Interviewees expressed skepticism in the market's ability to achieve a universal core carbon contract, and we should point out that the correlation among project types has been much lower than the correlation within project types.¹

Several models of price discovery and valuation exist today. Here are three:

A Call-Around Market exists either alongside or in place of an exchange-traded market. In financial services, the London Interbank Offered Rate (LIBOR) is a benchmark interest rate administered by the Intercontinental Exchange (ICE), which calculates the rate after asking major global banks how much they would charge other banks for short-term loans. This is similar to the method Ecosystem Marketplace uses to uncover prices by project type, vintage, location, etc. It has the advantage of offering depth of price, but not real time price data. We believe that this method will work symbiotically with exchange-generated prices, as happened in the days of the CCX.

An Electronic Market exists when prices are discovered via orders placed on a trading platform. Financial regulators prefer a centralized, independent exchange like ICE, but a private platform like CBL Markets can also serve this function in the interim. Indeed, the consultation document explicitly mentions the CBL Global Emissions Offset (GEO), which uses the lowest-priced Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)-compliant offset as a proxy for a core carbon price.

A Theoretical Social Cost of Carbon can provide an aspirational price instead of a market-driven one.

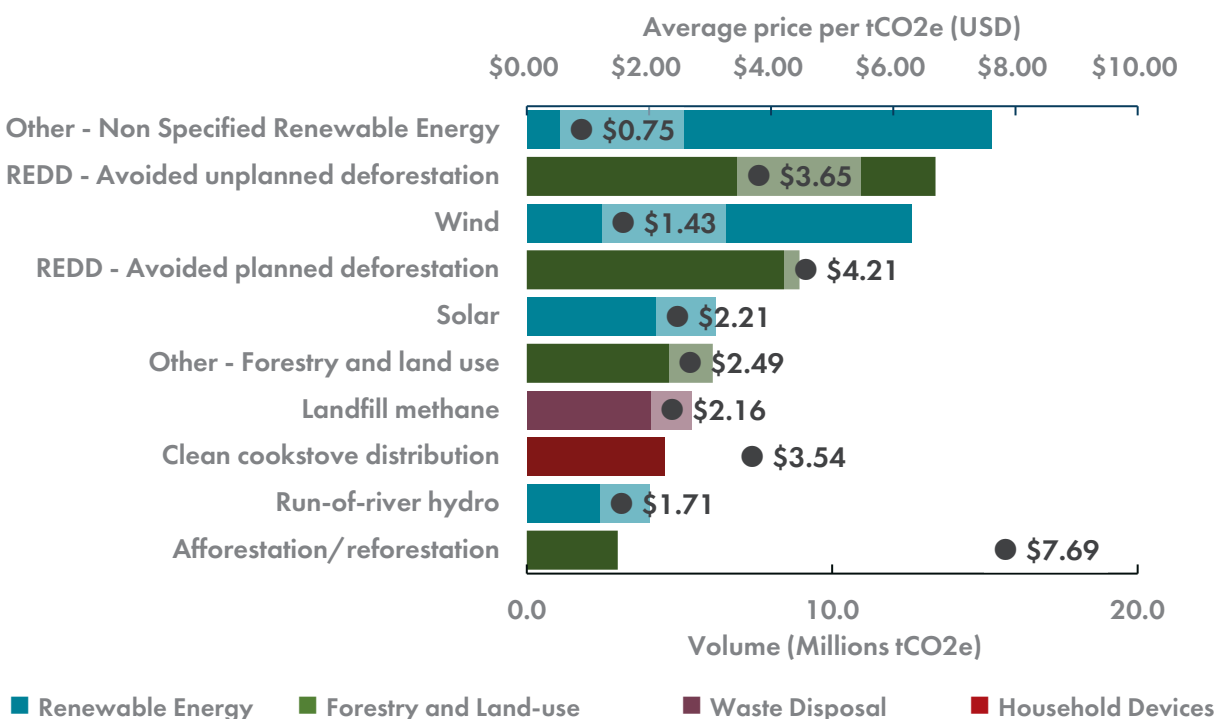
Project Categories and Types: Volumes and Average Prices

A close look at Ecosystem Marketplace data illustrates just how much price and transacted demand vary credit-to-credit, depending on additional attributes.

EM distinguishes offset transactions according to seven broad Project Categories, which are subdivided into Project Types. The highest volume Project Category transacted in 2019 was Renewable Energy at 42.4 MtCO₂e, followed by 36.7 MtCO₂e of Forestry and Land-use (Figure 6), representing a 78 percent increase and a 28 percent decrease as compared with 2018, respectively.

Over the past several years, the leading category of credits transacted by volume in the voluntary markets has flipped between Renewable Energy and Forestry and Land-use. Renewable Energy was the most-transacted project category in voluntary markets from 2015-2017. Although Renewable Energy volumes continued to grow in 2018, Forestry and Land-use volume surged by 264 percent that year, making it the most-traded category by volume at 50.7 MtCO₂e, representing over half of the market volume in 2018. Although Renewable Energy credits are consistently cheaper than Forestry and Land-use credits, some interviewees felt this trend was accelerated due to the fact that the Verified Carbon Standard (VCS) and Gold Standard stopped accepting Renewable Energy projects at the end of 2019, leading to a rush to issue and transact these cheaper credits (see [SOVCM 2020 Installment 1](#) for more information).

Figure 6. Top 10 Project Types by Volume Voluntary Carbon Credits, 2019



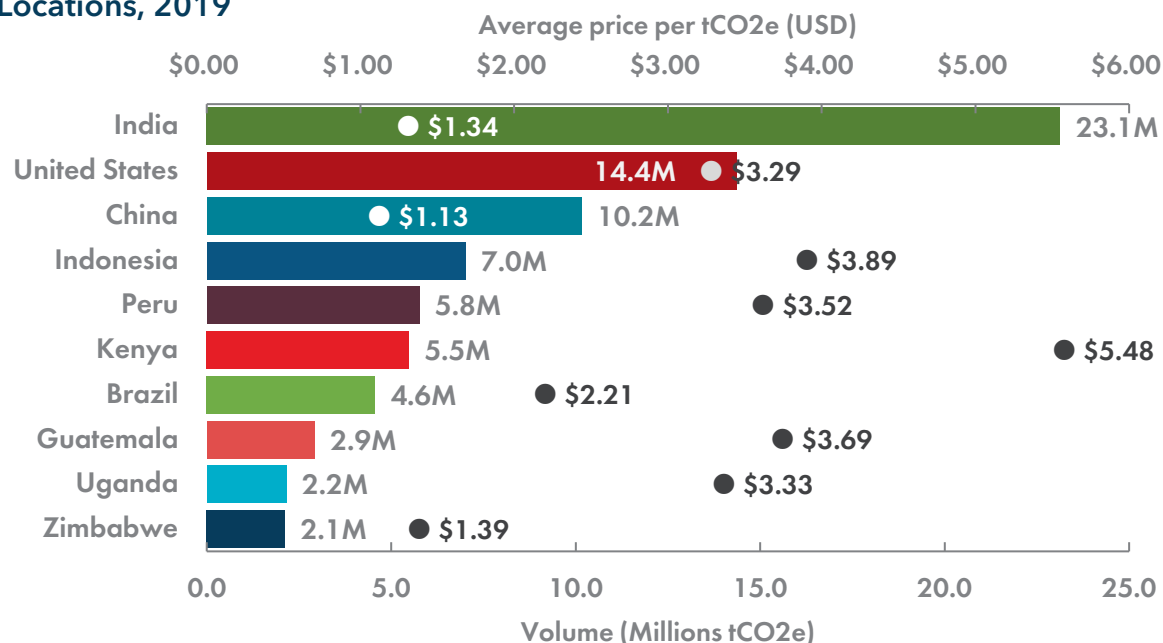
Source: Forest Trends' Ecosystem Marketplace.

Region & Location: Volumes and Average Prices

As shown in Figure 7 and 8, voluntary carbon projects developed in India, the United States, and China comprise a large portion of the source of offsets transacted in the voluntary markets in 2019. In India and China, most of these projects were Renewable Energy. These Renewable Energy projects were typically transacted at below-market-average prices. In fact, the mean average Indian renewables offset transaction price was just \$1.27. In the United States, Waste Disposal, Chemical Processes/Industrial Manufacturing and Forestry and Land Use were the most transacted by volume with average prices of \$2.26, \$1.57, and \$7.47, respectively.

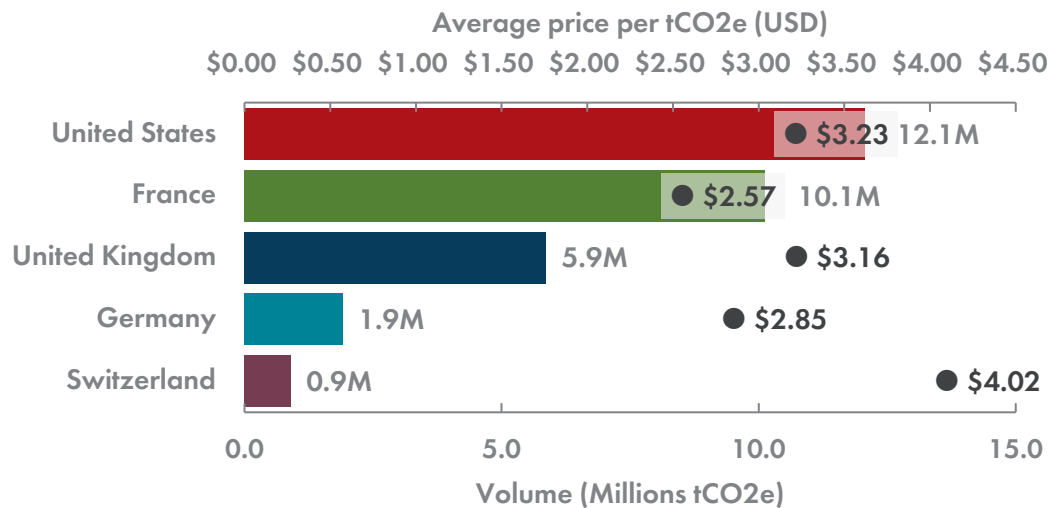
When an offset buyer's country was provided by survey respondents, the United States, France, and the United Kingdom emerged as the most common buyer locations (Figure 8). US buyers showed a preference for homegrown offsets. In fact, most voluntary carbon projects developed in the United States were sold to US buyers. Unlike the US, European buyers typically don't have the option of "buying local" in voluntary markets, as the European Union Emissions Trading Scheme (EU ETS) regulates many of the sectors that would otherwise produce voluntary carbon offsets. As such, there are fewer voluntary projects based in Europe. Buyers in France, the United Kingdom and Germany largely purchased offsets from Peru, Brazil, and India, with only a very small number of offsets being sourced in-country.

Figure 7. Top 10 Countries by Volume of Voluntary Carbon Credits Project Locations, 2019



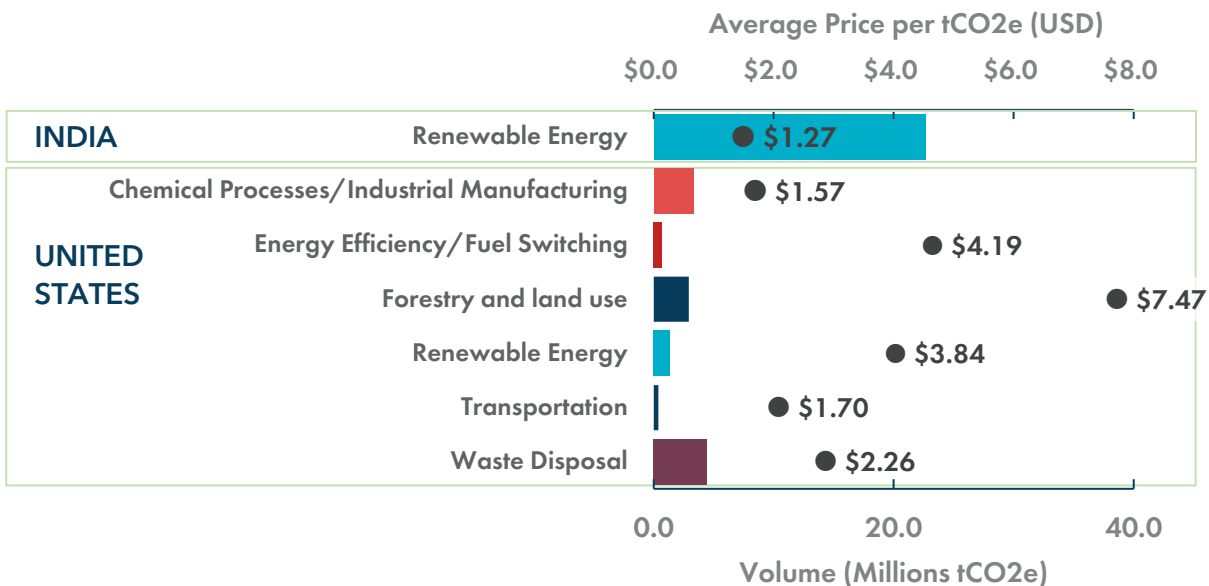
Source: Forest Trends' Ecosystem Marketplace.

Figure 8. Top Five Countries by Volume of Voluntary Carbon Credit Buyers, 2019



Source: Forest Trends' Ecosystem Marketplace.

Figure 9. Average Price and Volume of Voluntary Carbon Credits by Country and Project Category (Examples: India and USA), 2019



Source: Forest Trends' Ecosystem Marketplace.

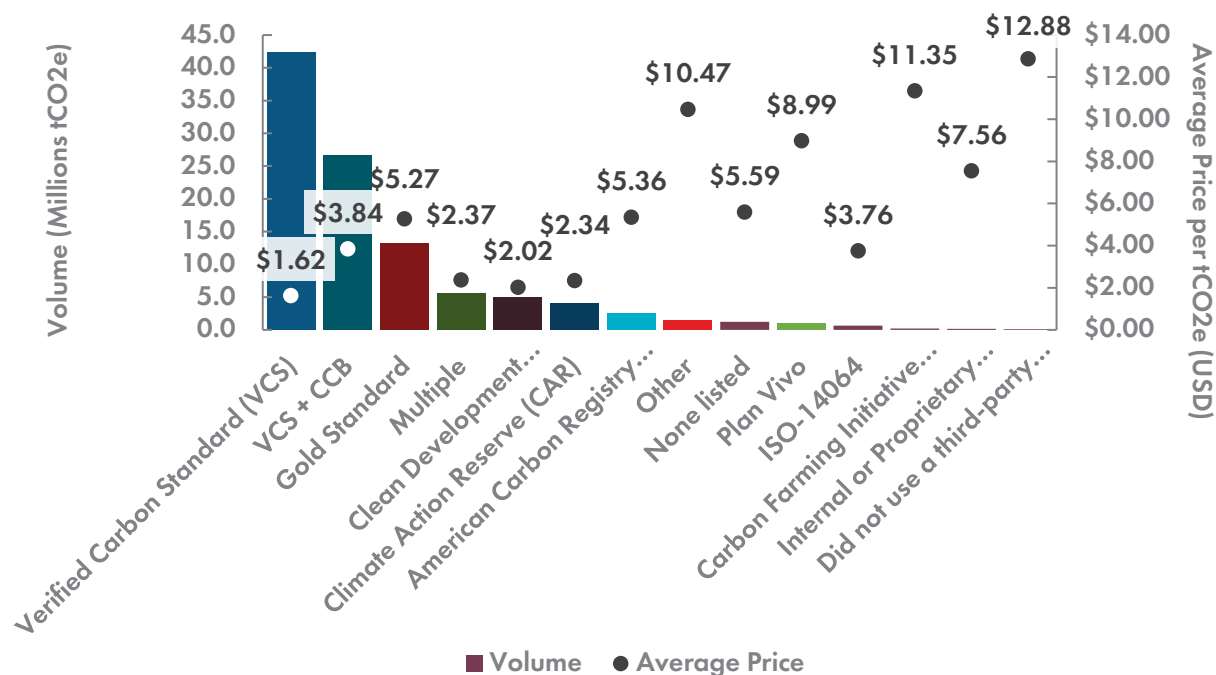
Standards and Co-Benefits: Volumes and Average Prices

Figure 10 shows the wide variation in average price and volumes transacted by standard that EM tracked in 2019. This variation also reflects the broad diversity in buyer preference and willingness-to-pay for voluntary offset credits. It is clear however that VCS offsets dominated the voluntary markets in 2019, with VCS and VCS+CCB (Climate, Community & Biodiversity standard) offsets accounting for 66.2 percent of transacted volume.

On first glance, the price of voluntary offsets varies significantly based on accreditation standard. However, this price differential may be more a reflection of underlying attributes such as project type, size and location, that are themselves associated with certain standards, rather than some underlying property of the standard *per se*. For example, VCS verifies the vast majority of traded REDD+ credits which are typically larger-volume transactions and often receive lower prices than other Forestry and Land-use credits. Gold Standard and Plan Vivo are likely earning a higher price per ton due in part to their focus on smaller volume transactions with greater co-benefits. The North American-focused standard American Carbon Registry (ACR)'s higher average price may reflect the higher cost of labor, land, and other inputs in high-income countries, as well as North American buyers' willingness to pay higher prices for offsets from their continent.

Standard-setting bodies have been working to quantify attributes associated with the Sustainable Development Goals (SDGs), but our analysis has not yet identified any standardized value associated with these impacts.

Figure 10. Average Price and Volume by Voluntary Carbon Credit Standards, 2019

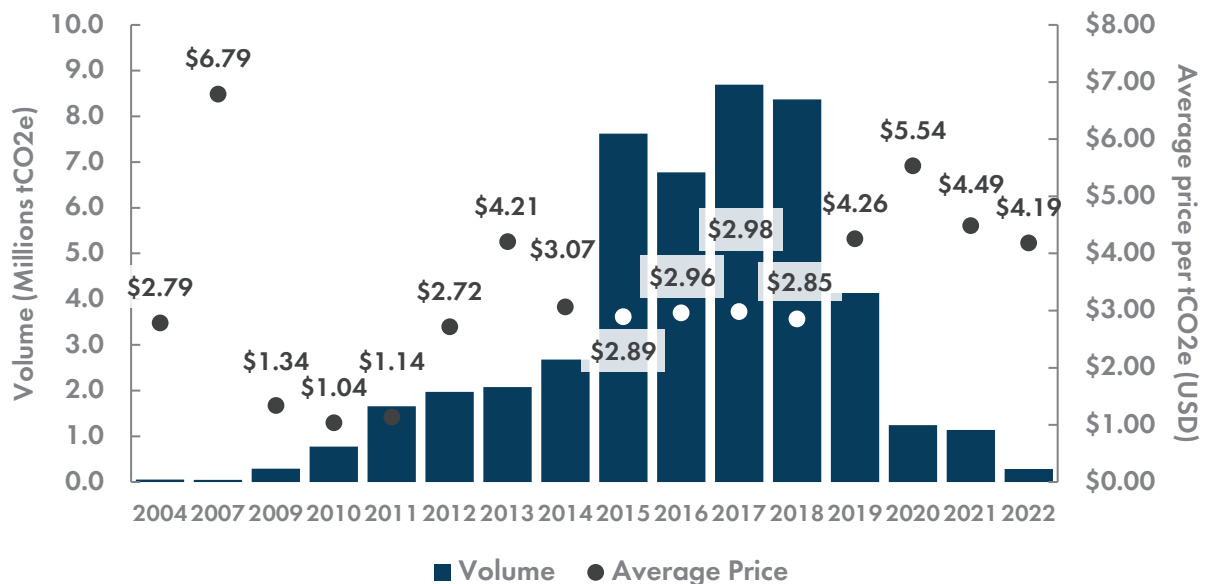


Source: Forest Trends' Ecosystem Marketplace.

Vintages: Volumes and Average Prices

In 2019, the majority of offsets transacted were from 2015 to present-year vintage, with some future vintages of 2020-2022 transacted as well (Figure 11). The increased volume and higher prices for more recent vintages, including future vintages, underscores buyers' preferences for newer credits, and that as historical supply is retired from the market that buyers will be seeking to establish more futures contracts.

Figure 11. Average Price and Volume by Voluntary Carbon Credit Vintages, 2019



Source: Forest Trends' Ecosystem Marketplace.

Conclusion: Scaling Up

Ecosystem Marketplace welcomes the work of the Taskforce, especially as markets are poised for a period of dramatic change. We are currently engaging with stakeholders to gather feedback about how best to scale up the frequency of the EM Carbon Survey data collection, increase the regularity of producing EM Insights (e.g., *State of the Voluntary Carbon Markets* installments, and other knowledge products), and otherwise provide transparency and unbiased insights for carbon markets.

The (Very Big) Grey Area of Voluntary Carbon Markets. In this installment we explored high-level analysis of responses to the EM Carbon Survey in terms of single attributes (for example, volume of most-traded credit type or average price of a particular vintage or standard). Although this sheds light on the overall scope and trends of voluntary carbon markets, it remains a somewhat theoretical exercise as credits are not sold on the basis of one attribute, but a combination of attributes. The power of EM data therefore lies in the ability to analyze pricing information for various combinations of multiple attributes. For example, what is the average price of a VCS-verified renewable energy credit originating from Asia, with a

vintage between 2016-2019? EM stands ready to supply such data to the market, while maintaining the confidentiality of individual survey respondents. We believe that this type of pricing detail will be essential if a core carbon price is to be accurately supplemented with data on additional attributes, in order to maintain quality and equity as the voluntary markets scale up.

And while we conducted our survey and interviews ahead of and concurrently as the Taskforce was facilitating its consultation process, the two covered much of the same ground – albeit with differing perspectives.

Ensuring Quality vs. Providing It. As early as April, market participants told the EM team that demand for voluntary offsets remained strong despite the COVID-19 pandemic.⁷ This came on the heels of EM analysis showing that the pipeline of existing projects could meet new demand for CORSIA-compliant offsets.⁸

As demand continued to grow, some forecasters projected a shortage of verified offsets. While such a shortage would drive new verified reductions and removals, some interviewees feared it could also prompt some companies to claim carbon neutrality or net zero emissions through the purchase of unverified offsets generated without third-party authentication. Interviewees, therefore, welcomed the Taskforce's effort to promote universally recognized criteria for describing what is, and is not, a recognized offset, but bridled at the implication that the Taskforce was "fixing" a broken market, instead of helping an established market grow without losing quality.

Indeed, there is an argument to be made that voluntary standards, having evolved through a bottom-up process over several decades, provide a better development framework than do top-down standards developed under early compliance programs. This suggests that efforts to impose overly prescriptive requirements could hobble rather than help the growth of voluntary markets.

Communication, Not Confinement. Interviewees repeatedly stressed the need for clear and effective communication regarding the role of voluntary carbon markets in a broader emission-reduction strategy but cautioned against overly prescriptive recommendations on issues such as vintage and project type.

Clarity of Terms. Interviewees welcomed efforts to achieve agreement on terms such as "net zero" and "carbon neutral," which are currently defined differently by different organizations.

Reliable Data Beyond Price. The most common and pervasive request came for reliable data on price variances by type, vintage, geographic location, and unique attributes. Such data will be increasingly useful if the Taskforce succeeds in generating a mechanism for creating a core carbon price.

⁷ Zwick, Steve (2020) "Demand for Carbon Offsets Remains Strong Despite Pandemic," *Ecosystem Marketplace*. Accessed at <https://www.ecosystemmarketplace.com/articles/how-covid-19-could-stall-efforts-to-meet-the-climate-challenge-and-what-to-do-about-it/>

⁸ Zwick, Steve (2020) "Global Carbon Markets Can More than Meet Civil Aviation Demand," *Ecosystem Marketplace*. Accessed at <https://www.ecosystemmarketplace.com/articles/new-analysis-global-carbon-markets-can-more-than-meet-civil-aviation-demand/>

APPENDIX A. 2020 EM CARBON SURVEY RESPONDENTS

Agrocortex Madeiras do Acre	Ecopart Assessoria em	Nakau Programme
Agroflorestal Ltda.	Negocios Empresariais Ltda.	NativeEnergy, a Public Benefit Corporation
Arbor Day Foundation	Ecosphere+ Ltd (part of Althelia Climate Fund)	Natural Capital Partners
Beijing Qianyuhui International Environmental Investment Co., Ltd.	ECOTIERRA Inc.	NatureBank Asset Management
BioCarbon Group Pte Limited	Ekos Kamahi	NEDBank
Biofilica Investimentos Ambientais S.A.	Element Markets	Nexus for Development
BIOFIX CONSULTORI	Enviro-Mark Solutions Limited	Nordic Offset Oy
Bischoff & Ditze Energy GmbH & Co.KG	trading as Toitū Envirocare	OurOffset Nonprofit LLC
Bluesource	Environmental Attribute Advisors	Pacific Hydro Chile S.A.
BOCS Foundation	Environmental Conservation Trust of Uganda (ECOTRUST)	Permanent Forests NZ Limited
Bonneville Environmental Foundation	EthioTrees vzw	Pronatura México,
Bosque Sustentable, A.C.	Everland LLC	Proyecto Mirador
BOSQUES SOSTENIBLES S.L.	Face the Future	Schneider Electric
Carbon Consulting Company	Fair Recycling Foundation	Second Nature
Carbon Forest Services	FairClimateFund	Secretaría del Medio Ambiente del Gobierno de la Ciudad de México
Carbon Neutral Pty Ltd.	First Climate Markets AG	SFI BV (Sustainable Forestry Investments)
Carbon Tanzania	Fondo Acción	Sigma Global
Carbon Offsets To Alleviate Poverty (COTAP)	Forest Carbon Limited	Sustainable Carbon - Projetos Ambientais Ltda
Carbone boréal	ForestFinest Consulting GmbH	Taking Root
CARBONEXT	Form International	Tasmanian Land Conservancy
Carbonfund.org Foundation	Forterra	The Association for Coastal Ecosystem Services (ACES)
Carbonsink Group S.r.l.	Gola Rainforest Conservation LG	The Climate Trust
Cassinia Environmental	GoodPlanet Foundation	The Nature Conservancy
Clean Air Action Corp	Green Business and Sustainable Solutions SAC	United Purpose
ClearSky Climate Solutions	Greenox	University for Life Sciences
ClimateCare Oxford Limited	Hivos	Urban Offsets, Inc.
ClimateSeed	Infinite Solutions	US Forest Capital
ClimeCo Corporation	Inlandsis Fund	Vertis Environmental Finance Ltd.
CO2 Australia	Instituto de Conservação e Desenvolvimento Sustentável da Amazônia - IDESAM	Vi-skogen/Vi Agroforestry
CO2balance UK Ltd	KHEPL	WayCarbon
CO2CERO SAS	King County Department of Natural Resources and Parks	Wildlife Conservation Society
CO2Logic	KKI WARSI	Will Solutions
Code REDD/ STF	Lavola 1981, SAU	World Land Trust
Colbún	Life Climate and Energy Limited (Life Enerji)	Worldview International Foundation
Conservation International	Livelihoods Fund	xpand Foundation
Cool Effect	MÉXICO2 - Plataforma Mexicana de Carbono	Yayasan Pelestari Ragam Hayati dan Cipta Fondasi Indonesia (Yayasan PRCF Indonesia)
C-Quest Capital	Microsol	ZeroMission AB
Credible Carbon (Pty) Ltd	Molpus Woodlands Group, LLC	
DelAgua	myclimate	
Ducks Unlimited, Inc.		
Eco2librium		
Ecological Carbon Offset Partners		

The Directory of EM Carbon Survey Respondents is also available on the EM Carbon Markets Hub: www.ecosystemmarketplace.com/carbon-markets



Pioneering Finance for Conservation

Biodiversity Initiative

Promoting development of sound, science-based, and economically sustainable mitigation and no net loss of biodiversity impacts

Coastal and Marine Initiative

Demonstrating the value of coastal and marine ecosystem services

Communities and Territorial Governance Initiative

Strengthening local communities' capacity to secure their rights, manage and conserve their forests, and improve their livelihoods

Ecosystem Marketplace

A global platform for transparent information on environmental finance and markets, and payments for ecosystem services

Forest Policy, Trade, and Finance Initiative

Supporting the transformation toward legal and sustainable markets for timber and agricultural commodities

Public-Private Finance Initiative

Creating mechanisms that increase the amount of public and private capital for practices that reduce emissions from forests, agriculture, and other land uses

Supply Change

Tracking corporate commitments, implementation policies, and progress on reducing deforestation in commodity supply chains

Water Initiative

Promoting the use of incentives and market-based instruments to protect and sustainably manage watershed services

[Learn more about our programs at www.forest-trends.org](http://www.forest-trends.org)