



# Unlocking Potential

State of the Voluntary Carbon  
Markets 2017

## Buyers Analysis



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## Introduction

What do *pre-gaming*, *dwarf planets*, and *carbon neutral* have in common? Each of these new words became popular enough in 2006 to catch the attention of the New Oxford American Dictionary, but only one—carbon neutral—was selected as the Word of the Year. The selection of carbon neutral represented, as the dictionary's editor succinctly put it, “not just the greening of our culture, but the greening of our language.”<sup>1</sup>

The selection meant that businesses, individuals, and governments recognized both the threat of climate change, and their responsibility to halt it. These organizations and individuals, after trying to reduce their greenhouse gas (GHG) emissions as much as possible, looked to reduce outside their homes and work by purchasing **carbon offsets**.<sup>2</sup> The year 2006 also marked the first time Ecosystem Marketplace began collecting data for our annual *State of the Voluntary Carbon Markets* reports.<sup>3</sup> Since then, we have tracked more than \$4.8 billion<sup>4</sup> spent cumulatively on buying and reselling carbon offsets.

These days, across nearly any sector, you can find businesses that offset part or all of their emissions. As you pay for coffee in the morning, both the credit card (Bank of America) and beverage (Keurig Green Mountain coffee) may come from companies with carbon neutrality goals. At work, you might interact with companies that offset simply by logging onto your computer (Microsoft), using software (Adobe, Salesforce), or searching the internet (Google).

What drives companies and individuals to voluntarily pay for carbon offsets? Voluntary buyers can have complex and varied motivations for offsetting, and they employ a variety of strategies and preferences when purchasing offsets. This report tries to answer the following questions: who are voluntary buyers, where are they from, why do they purchase offsets, and how do they decide which offsets to buy? The end of this mini-report examines the current supply of offsets (see page 16) and common myths around voluntary offsetting (see page 18). But before diving into the details, please read about the basics of carbon neutrality and voluntary carbon offsetting, beginning on page 2.

## Methodology

This report accompanies the *Unlocking Potential: State of the Voluntary Carbon Markets 2017* report and focuses specifically on voluntary offset buyer dynamics in 2016. Information presented in this report was collected from suppliers responding to our survey about their buyers. We did not survey buyers directly. When we asked about buyer motivation or reasoning, the answers reflected the perspective of the seller in interacting with the buyer.

Not all of the suppliers who responded to our carbon survey provided information about their buyers, and not all of the buyers were end buyers. In many cases, **project developers** will sell offsets to intermediary organizations, which then resell those offsets to **end buyers**. (The offset lifecycle is explained in more detail on page 3). In our 2017 survey, suppliers (which includes both project developers and intermediary organizations) reported transacting 27.3 MtCO<sub>2</sub>e offsets (55%) to end buyers and another 21.9 MtCO<sub>2</sub>e (45%) to intermediaries.

When offsets were transacted to end buyers, we included more detailed questions around buyer sector, motivation, and more. Response rates varied by question: with some answers covering as many as 16.7 MtCO<sub>2</sub>e or as little as 2.6 MtCO<sub>2</sub>e (34% and 5% of the total offsets reported, respectively). Read the notes underneath each figure for a sense of market share captured with each question.

For more information about our methodology, glossary of defined terms, or the current state of the **voluntary markets**, please visit the *State of the Voluntary Carbon Markets 2017* report.

<sup>1</sup> “Carbon Neutral: Oxford Word of the Year,” Oxford University Press, [https://blog.oup.com/2006/11/carbon\\_neutral/](https://blog.oup.com/2006/11/carbon_neutral/).

<sup>2</sup> All terms in bold green text are defined in the Glossary in Appendix 2 of the main report, *Unlocking Potential: State of the Voluntary Carbon Markets 2017*.

<sup>3</sup> The first report was published in 2007, *Picking Up Steam: State of the Carbon Markets 2007*, <https://new.forest-trends.org/publications/picking-up-steam/>.

<sup>4</sup> All monetary values are reported in US\$ (\$) unless otherwise noted.

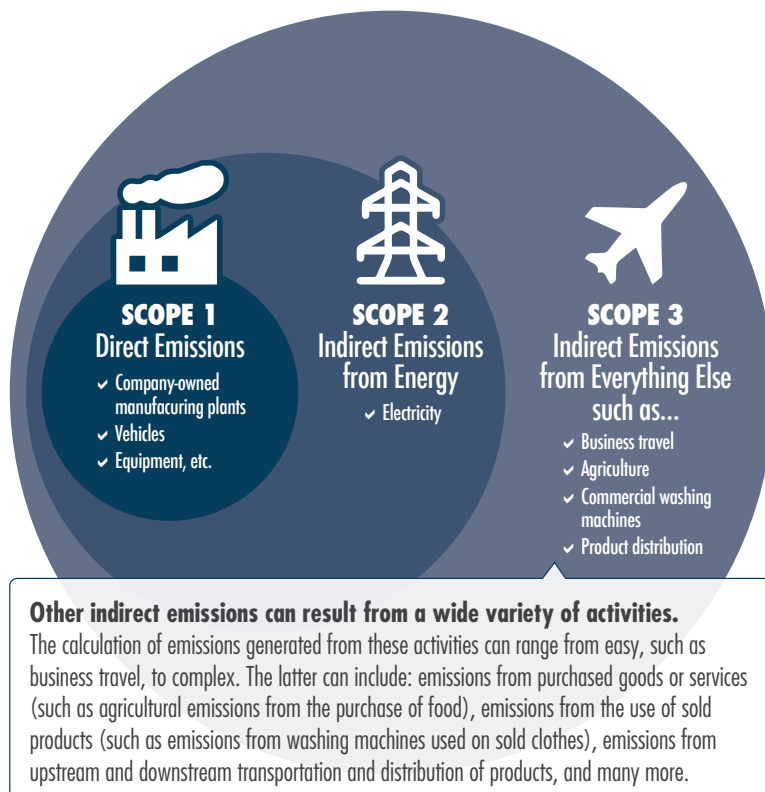
# Beginner's Guide to Reducing Emissions

Becoming carbon neutral is incredibly simple—on the surface, at least. There are three basic actions: measure, reduce, and offset your GHG emissions. However, the details of what to measure, how to reduce, and which offsets to buy can become infinitely more complex.

**1. Measure your emissions.** As the old management adage says, you can't manage what you don't measure. For an individual or an individual action, taking stock of your emissions can be as simple as punching a few numbers into an online calculator and looking at the result. Many carbon offset sellers offer such services on their websites so visitors can easily estimate their emissions. For example, Delta's Carbon Calculator simply asks for a flight confirmation number to determine the carbon footprint.

Companies that report publicly on their emissions typically go a step further than an online calculator and adhere to a widely-accepted standard like the Greenhouse Gas Protocol or ISO 14064 standard. They might pay thousands of dollars to hire an external firm to do a thorough carbon footprint analysis or to verify internal calculations. While calculating some types of emissions is straightforward, determining indirect emissions is less so (see Figure 1). Companies might calculate only those indirect emissions that are easy to compute, or might set targets for increasing the measurement of indirect emissions over time.

Figure 1: Sources of Emissions



**2. Reduce what you can.** There are many ways to reduce emissions. Typically, the individual, company, or government that is trying to reduce emissions will start with the cheapest, easiest methods that will have the greatest impact—the low-hanging fruit. Reducing Scope 1 and 2 emissions (see Figure 1) is relatively simple: wherever possible, companies can switch to cleaner fuels or install scrubbers to minimize direct emissions. Scope 3 is trickier—since those emissions are controlled by other companies and organizations, most companies have limited control over them.

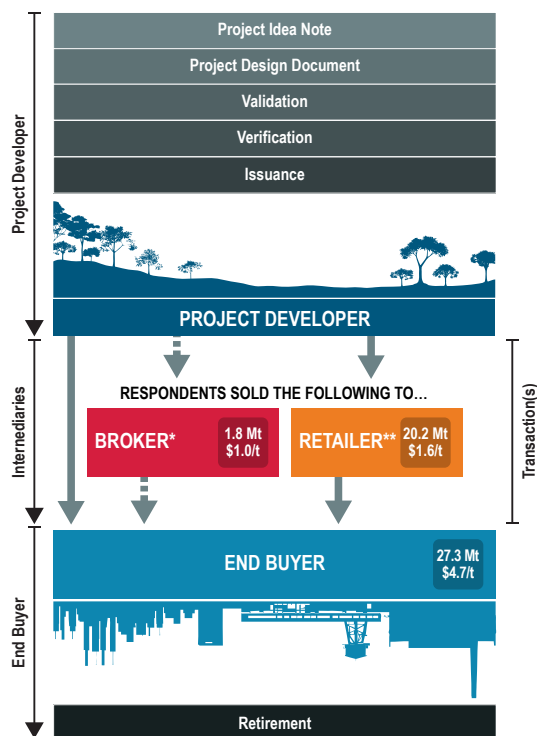
*How to tell if a company is greenwashing?* For best practice, companies should set a goal and deadline to reduce emissions. Goals are normally based on a blend of considerations—what is practical and achievable, what industry norms are, how much pressure is coming from consumers, and the company's overall commitment to sustainability. A new initiative called the Science Based Targets<sup>5</sup> encourages companies to set their GHG reduction goals in alignment with the Paris Agreement target of limiting climate change to 2 degrees Celcius (C).

**3. Offset the rest.** Internal initiatives are often not enough for companies and organizations to achieve their GHG reduction goals. At some point, reducing emissions becomes cost prohibitive or impractical. An individual wanting to take a flight will be hard pressed to find a plane running on anything cleaner than jet fuel. Similarly, a company trying to reduce upstream emissions from their **suppliers** may only have so much sway over third-party practices and investments.

<sup>5</sup> Science Based Targets, accessed July 28, 2017, <http://sciencebasedtargets.org>.



Figure 2: The Offset Cycle from Project Development to **Retirement**



\*Brokers do not take ownership of offsets. We remove double counting in instances where project developers and brokers respond on behalf of the same offset transaction.

\*\*Retailers do take ownership of offsets.

Notes: Based on 49.2 MtCO<sub>2</sub>e of offset data collected.

To bridge that gap, many opt to purchase carbon offsets. These are units of GHG emissions that are reduced, avoided, or sequestered by one entity to compensate for one tonne emitted by another.<sup>6</sup> There are many different **project** types that can produce offsets, from renewable energy projects like installing wind turbines or solar panels, to planting trees to absorb carbon from the atmosphere.

While voluntary suppliers historically developed projects in an unregulated context, today most projects adhere to one of several voluntary **standards**. These standards require projects to submit to third-party **verification** to ensure projects have achieved their stated emissions reductions. Standards differ by which project types they certify and the process for achieving certification. Some standards require projects to not only reduce emissions, but also address other non-carbon impacts (called **co-benefits**), like employing or training a certain number of local residents or protecting biodiversity.

### Why voluntary offset prices vary

While one tonne of GHGs reduced anywhere in the world is the same as another, scientifically-speaking, in reality, buyers pay varying prices for offsets. Last year, we tracked buyers paying less than \$0.5/tCO<sub>2</sub>e to more than \$50/tCO<sub>2</sub>e.

The diversity in prices reflects the huge variation in both the supply and demand sides of the voluntary carbon market. Prices vary based on a number of different factors about the project itself—the project type (startup and operating costs differ based on how the offsets are being produced), location, size of the **transaction**, whether or not the project has additional revenue streams, and how much the project emphasizes co-benefits. They also reflect the diversity in why buyers purchase offsets, and how they choose the offsets they buy. Some buyers choose offsets based primarily on the cost, others prefer certain project types or locations, or projects with co-benefits, and are willing to pay a premium for those offsets.

A supermarket, for example, may choose to purchase cookstove offsets exclusively because they want to support healthy kitchens—even if offsets from that project type cost more than offsets from other project types. In another case, a company in Japan might pay more for offsets sourced close to home, even though Japanese projects would have higher operating costs than those in China.

Offset prices also vary depending on who is buying. Since there is no centralized voluntary marketplace, connecting buyers with sellers can be difficult. While some project developers have their own marketing and advertising teams to identify and promote their project directly to end buyers, others outsource that to an intermediary organization, like a **retailer** or **broker**. Unsurprisingly, end buyers paid more for offsets (\$4.7/tCO<sub>2</sub>e on average) than retailers or brokers (\$1.5/tCO<sub>2</sub>e on average).<sup>7</sup>

<sup>6</sup> In addition to offsets, many companies purchase renewable energy gained from certifications like the US-based Renewable Energy Certificates (RECs), international RECs (iRECs), Tradable Instruments for Global Renewables (TIGRs), or European Guarantees of Origin (GOs). As of 2015, renewable energy purchases can be deducted from a company's emissions reporting under the Greenhouse Gas Protocol Corporate Standard for their Scope 2 emissions. Offsets are not allowed to be deducted from Scope 2 emissions reporting.

<sup>7</sup> This and the next section, Where Are Voluntary Buyers?, are the only two sections that include intermediaries in the buyer data. Data about transactions to intermediaries has been removed everywhere else, since things like buyer motivation are inherently different for intermediaries and end buyers.

Additional costs for business development, marketing, etc., can also influence an offset's price tag—along with plain old product mark-up. So, too, can the transaction size. Larger offset orders sometimes result in discounts, since smaller transactions often require the same amount of paperwork (and staff hours) but for less revenue.



Biodigesters at New York City's largest wastewater treatment plant convert organic waste sludge to commercial-grade biogas and solid waste that can be used as compost. Operating at full capacity, these digesters can cut carbon emissions by as much as 90,000 MtCO<sub>2</sub>e per year. Although this facility is not selling carbon offsets, many landfill methane projects do, and its emissions reductions will help New York City reach its goal to reduce emissions 80% below 2005 levels by 2050.\*

\*"Made in Brooklyn: Food to Fuel," Urban Green Council, published March 4, 2015, <http://urbangreencouncil.org/content/news/made-brooklyn-food-fuel>.

Photo Credit: Ellen McKnight / Alamy Stock Photo

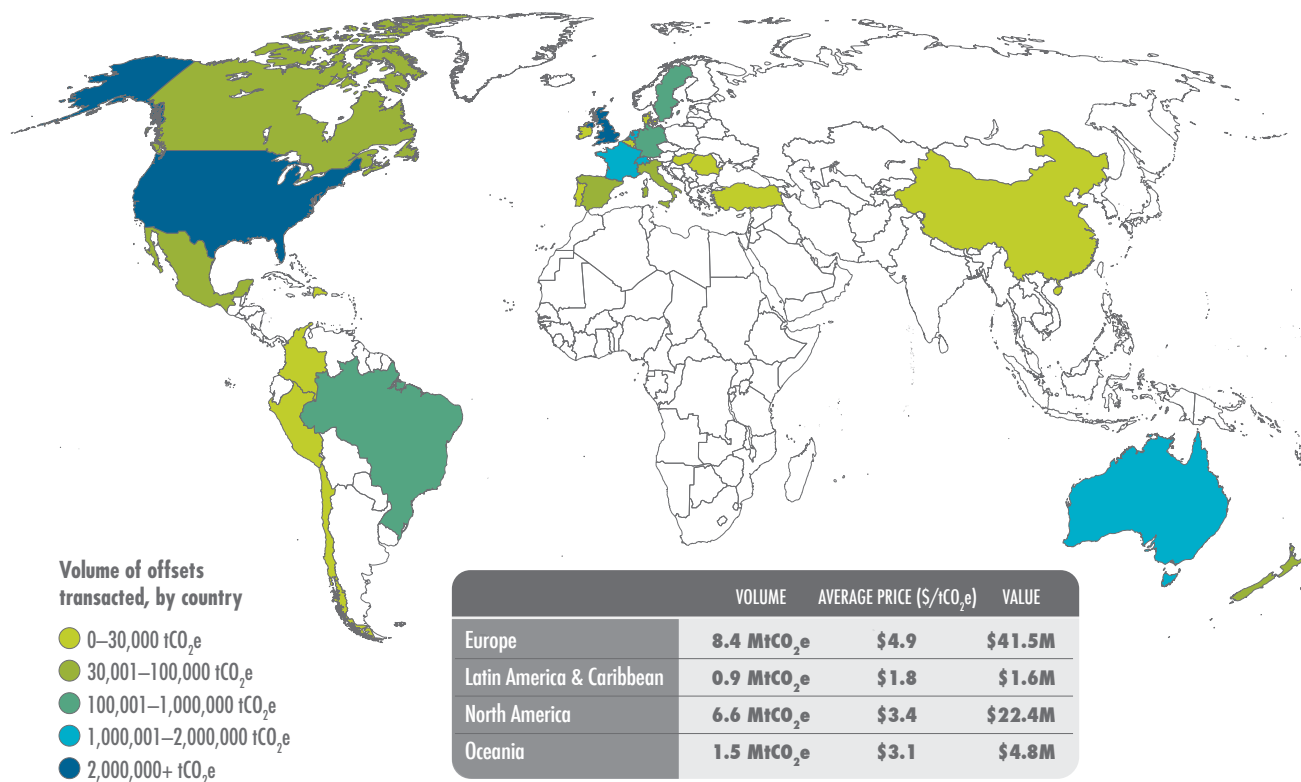
## Where Are Voluntary Buyers?

While voluntary carbon offset projects are found around the world, voluntary offset buyers are typically from industrial or post-industrial “Annex I” countries. Annex I countries were identified in the first global climate change agreement, the Kyoto Protocol, as countries that had contributed to historic climate change and needed to make emissions reductions targets. The United States (US) government infamously did not agree to reduce emissions, but since then many US businesses have joined those in Europe,<sup>8</sup> Australia, and other Annex I countries to voluntarily purchase offsets.

Ten years after the Kyoto Protocol became active, a new climate change agreement, the Paris Agreement, was negotiated in 2015, calling on every country to make emissions reductions targets. However, voluntary buyers in 2016 largely reflected the geographical distribution of those in years past, with 48% of offsets sold to buyers in Europe and another 38% of offsets sold to North American<sup>9</sup> buyers. Smaller volumes sold to buyers in Oceania (9%) and Latin America and the Caribbean<sup>10</sup> (5%), while buyers from Africa and Asia combined purchased less than 1% of the remaining volume.

The bulk of offsets were sold to buyers who purchased offsets in previous years, but new buyers did appear in Europe, Latin America and the Caribbean, and North America in 2016. For the most part, these buyers did not purchase as many offsets as returning buyers; for example, though 17% of European buyers were new last year, they only purchased 4% of offsets sold in that region. New buyers from Latin America and the Caribbean purchased the highest percentage of offsets compared to other regions: over one-fourth (27%) of reported Latin America and the Caribbean buyers purchased their first offsets in 2016, and they purchased 14% of total offsets sold to Latin America and Caribbean buyers.

Figure 3: Market Size by Buyer Region and Country, 2016



Notes: Based on survey responses representing 17.5 MtCO<sub>2</sub>e transacted to intermediary and end buyers. Africa and Asia are not included in table due to insufficient data.

<sup>8</sup> In this report, “Europe” includes European Union countries and non-EU European countries including Turkey, Russia, and Georgia.

<sup>9</sup> In this report, “North America” includes the United States and Canada.

<sup>10</sup> In this report, “Latin America and the Caribbean” includes Mexico along with Central American and South American countries.

Though European and North American buyers continued to purchase the bulk of offsets, buyers from these regions had different profiles. European voluntary offset buyers included a mix of for-profit companies (80%), alongside not-for-profit (7%) and government (4%) organizations. The remaining 9% of buyers came from “other” organizations and individuals. Though European for-profit buyers were behind 80% of all transactions, they purchased 91% of all offsets. Of the 5.2 MtCO<sub>2</sub>e offsets sold to for-profit buyers in Europe, small-to-medium enterprises purchased 18%, while domestic companies bought another 42% of those offsets and multinational corporations purchased the remaining 40%.

As with buyers from Europe, the bulk (68%) of North American buyers were for-profit organizations. However, North American buyers were a bit more diverse, as the remaining buyers were government organizations (7%), not-for-profit organizations (11%), and “other” organizations or individuals (14%). Of the 3.9 MtCO<sub>2</sub>e purchased by North American for-profit buyers, large, multi-national corporations purchased the majority (75%) of offsets, while domestic companies and small-to-medium enterprises purchased 18% and 7%, respectively.

These buyers also had different priorities when purchasing offsets. European buyers looked to support not just carbon reductions but also co-benefits, and suppliers sold 41% of offsets to European buyers because of the associated non-carbon benefits. Not all buyers shared this concern: 20% of offsets were sold to European buyers because of their cost competitiveness. In comparison, the largest share of North American buyers prioritized cost, with 34% of offsets purchased because of their price. Another 29% of offsets were sold on the basis of the offsets’ “fit” with the organization—often a combination of cost, co-benefits, project type, or other factors that can tie an offset to a company’s activities or aspirations. For example, a utility company might prioritize buying landfill gas or renewable energy offsets because of the link such offsets provide to clean energy—an activity near and dear to a utility company’s operations. Finally, just over a quarter (26%) of offsets were purchased by North American buyers because of the co-benefits.

Respondents reported that few buyers *primarily* purchased offsets because of the offset project’s location. Yet buyers from different regions did show marked preference for offsets from particular regions. European buyers were the most global, sourcing nearly all offsets from Asia (41%), Africa (28%), and Latin America (24%), but just 4% from European projects. In contrast, North American buyers tended to prefer offsets closer to home: 80% of all offsets sold to North American buyers came from projects based in North America. On a smaller scale, buyers from Oceania mirrored those from Europe (purchasing all but 13% of offsets from abroad), while Latin American buyers turned even more inwards than their North American counterparts (sourcing 100% of all offsets from Latin American projects).

Interest in buying offsets locally is nothing new. Several countries have domestic offsetting programs or policies to encourage voluntary payments to projects in-country. This includes the United Kingdom’s Woodland Carbon Code, Mexico’s voluntary carbon offset exchange MexiCO<sub>2</sub>, Australia’s National Carbon Offsetting Scheme, New Zealand’s Enviro-Mark and Permanent Forest Sink Initiative, Japan’s J-Credit scheme and more. The two most recent governments to make voluntary carbon policies are Colombia’s Voluntary Carbon Market Platform and the Netherlands’ “Green Deal” program, both of which are described in greater detail in our regional complementary report.<sup>11</sup>

While the United States has no official voluntary offsetting programs, a number of US states, companies, and individuals have committed to making voluntary emissions reductions, especially in light of the US decision to leave the global Paris Agreement. Perhaps these entities will team up in the future to work collectively through a voluntary program—or perhaps they will continue the American tradition of working on these goals individually.

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<sup>11</sup>Kelley Hamrick and Melissa Gallant, *Unlocking Potential: State of the Voluntary Carbon Markets 2017 – Regional Analysis* (Washington, DC: Forest Trends, 2017). <http://forest-trends.org/releases/p/sovcm2017>.

# Who Are Voluntary End Buyers?

With no mandate to purchase carbon offsets, who are voluntary end buyers? These buyers represent companies of all sizes and sectors, showing that one size does not fit all when it comes to caring about the climate.

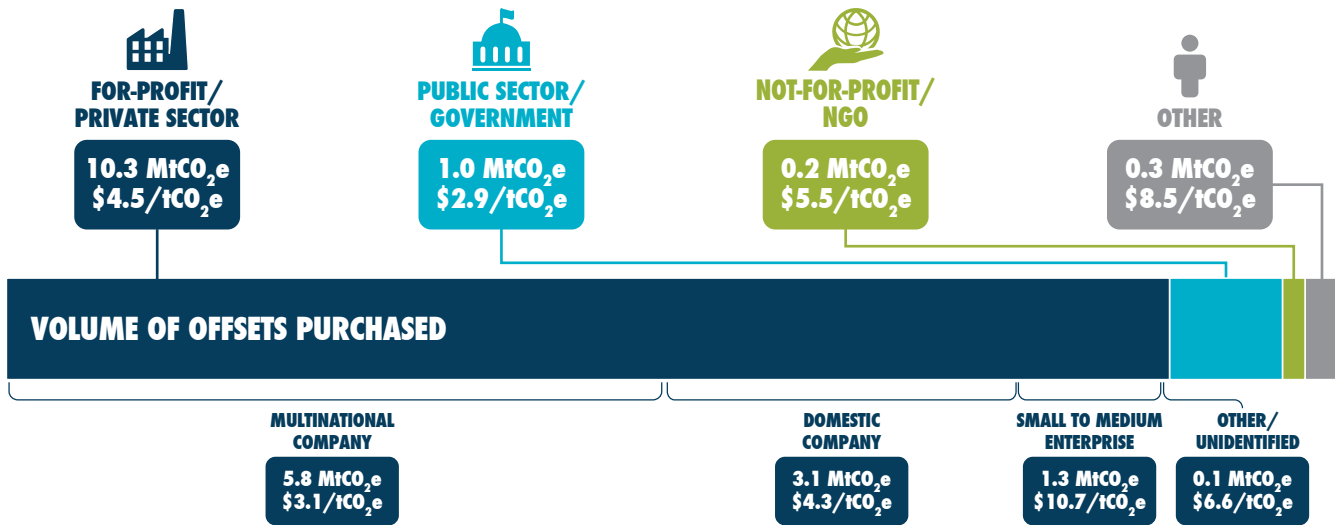
End buyers are the driving force behind the voluntary carbon market, and knowing who they are, why they offset, and why they choose the offsets they buy, gives insight into how the market works.

Most end buyers have purchased carbon offsets in the voluntary market before, and in 2016 those returning buyers accounted for almost all (94%) of the volume of the total offsets. Buyers new to the market purchased just 6% of the volume, but they conducted almost a third (30%) of 2016 transactions by count. Their average transactions were much smaller in size (about 40 KtCO<sub>2</sub>e per transaction) than returning buyers (over 260 KtCO<sub>2</sub>e per transaction).

Figure 4: Volume of Offsets Purchased and Count of Transactions by Buyer Experience



Figure 5: Volume of Offsets Purchased and Average Price Paid by Buyer Profit Status



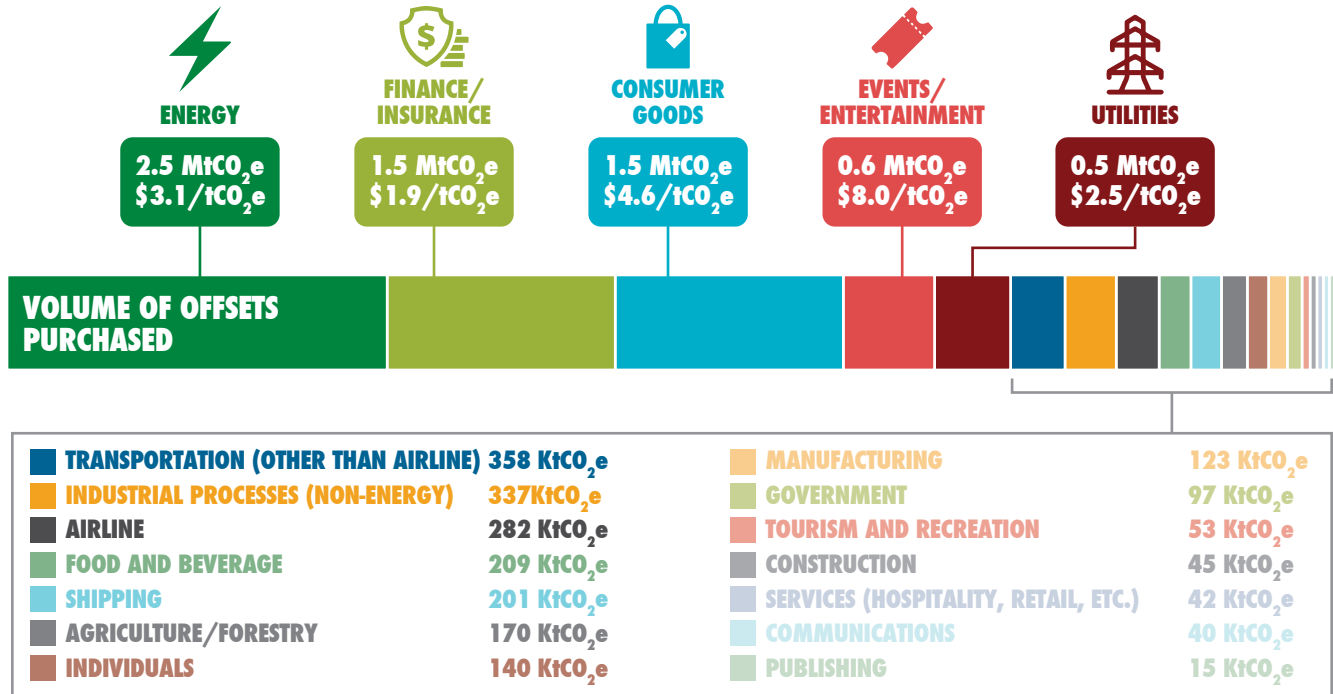
Notes: Based on survey responses representing 11.7 MtCO<sub>2</sub>e transacted to end buyers by all suppliers.

In addition to their experience in the market, survey respondents identified end buyers based on their profit status and sector. For-profit/private sector companies were the buyers in the bulk of offset sales by volume (88%), value (88%), and count of transactions (61%). Survey respondents reported these companies transacted the highest average transaction size (190.1 KtCO<sub>2</sub>e), followed by public sector/government buyers (92.0 KtCO<sub>2</sub>e), and not-for-profit/non-governmental organization (NGO) buyers (20.6 KtCO<sub>2</sub>e). Buyers in the “other” profit status category reported the lowest average transaction size (16.7 KtCO<sub>2</sub>e) and higher average prices (\$8.5/tCO<sub>2</sub>e, compared with \$4.7/tCO<sub>2</sub>e for all offsets sold to end buyers). These higher prices may reflect an increased cost of small transaction sizes or an increased willingness of individual buyers to pay more for projects with additional non-carbon benefits.

Within the for-profit/private sector category, larger companies tended to purchase higher volumes of offsets at lower prices than smaller companies. Multinationals purchased the most offsets (57%) at the lowest prices (\$3.1/tCO<sub>2</sub>e), followed by domestic corporations (30% at \$4.3/tCO<sub>2</sub>e). Small to medium-sized enterprises bought the fewest offsets (13%) and at the highest prices (\$10.7/tCO<sub>2</sub>e).

Companies and organizations in many sectors are voluntarily offsetting their emissions, with a few key industries leading the way. In 2016, the top five sectors purchased 75% of the total offsets sold to end buyers. Buyers in the energy sector category purchased the highest volumes of offsets (29%), followed by buyers in the finance/insurance (17%), consumer goods (17%), events/entertainment (6%), and utilities (6%) sectors.

Figure 6: Volume of Offsets Purchased and Average Price Paid by Buyer Sector



Notes: Based on survey responses representing 8.9 MtCO<sub>2</sub>e transacted to end buyers.

Many other sectors are smaller participants in the carbon offset market. Transportation accounted for about 7% of the market volume of carbon offsets sold on the voluntary market in 2016, with 4% coming from airlines and 3% from other transportation sectors. In 2016, the industrial processes (non-energy) sector accounted for 4%, and the shipping, agriculture/forestry and food and beverage sectors accounted for 2% each. Manufacturing, government, tourism and recreation, construction, services, communications, and publishing accounted for 6% in total. Individuals also purchased offsets. While they commanded a low overall volume (2% of market volume), they paid high average prices (\$9.1/tCO<sub>2</sub>e), compared with \$4.7/tCO<sub>2</sub>e, the average price paid by end buyers.

## In Focus: Voluntary Carbon Offset Buyer Sectors

Several survey respondents sold to end buyers not listed in our sector categories, several of whom wrote in “higher education” (not listed in Figure 5). Colleges and universities are uniquely positioned to combat climate change. As the educators of the next generation, they naturally have an eye on the future. Many also operate like microcosms of the larger world, complete with residences, offices, transportation, athletic facilities, and food systems. Some even generate their own power, manage their own waste, etc., all of which makes higher education particularly interesting from a carbon management perspective. Over 600 US institutes of higher education have committed to going climate neutral as part of the Climate Leadership Network.\* In the United States, 318 colleges and universities have also committed to the “We are still in” declaration—a collection of businesses, states, towns and cities, and institutes of higher education that have committed to adhering to the Paris Climate Agreement despite the United States’ decision to withdraw.\*\*

Events/Entertainment was the fourth largest sector in 2016. In recent years, an increasing number of events have committed to going carbon neutral. Some were environmentally-themed events, like New York City’s Climate Week, or the 2016 signing ceremony for the Paris Agreement.\*\*\* Sporting events are entering the game too. The 2014 FIFA World Cup in Rio de Janeiro offset 331 KtCO<sub>2</sub>e (251 KtCO<sub>2</sub>e of their own and another 80 KtCO<sub>2</sub>e from fans) from Clean Development Mechanism (CDM)-certified projects in Brazil.† In an effort to make the 2016 Super Bowl, held in San Francisco, a “net-positive” event, the Host Committee decided to offset the game’s Scope 1 and 2 emissions through a combination of offsets and RECs, and offset a portion of the event’s Scope 3 by offsetting players and officials’ travel emissions.†† They also undertook other carbon reduction measures, like planting 28,000 trees around the region and encouraging fans to use public transportation or ride bicycles.

\*“The Climate Leadership Network,” Second Nature, accessed August 2, 2017, <http://secondnature.org/who-we-are/network/>.

\*\*“Open letter to the international community and parties to the Paris Agreement from U.S. state, local, and business leaders,” We are still in, accessed August 2, 2017, <http://wearestillin.com/>.

\*\*\*“Celebrating Climate Neutral Events,” Climate Neutral Now, accessed August 2, 2017, <http://climatenutralnow.org/Pages/Events.aspx>.

†FIFA to offset all its operational carbon emissions through certified projects in Brazil, FIFA, accessed August 2, 2017, <http://www.fifa.com/worldcup/news/y=2014/m=6/news=fifa-to-offset-all-its-operational-carbon-emissions-through-certified--2379123.html>.

††Super Bowl 50 to Develop “Green” Legacy for San Francisco Bay Area, Super Bown 50 Host Committee, accessed August 2, 2017, <http://www.sfbaysuperbowl.com/super-bowl-50-to-develop-green-legacy-for-san-francisco-bay-area#bh2ROXoGwD5AWOFF.97>.



The 2014 FIFA World Cup in Rio de Janeiro offset 331 KtCO<sub>2</sub>e (251 KtCO<sub>2</sub>e of their own and another 80 KtCO<sub>2</sub>e from fans) from Clean Development Mechanism-certified projects in Brazil.\* The Maracanã stadium, where many games were held, is powered entirely by rooftop solar panels, and its photocatalytic roof even removes pollution from the air.

\*“The First Net-Zero-Energy Stadium Will Be In The Next World Cup,” Fast Company, published October 24, 2012, <https://www.fastcompany.com/1680755/the-first-net-zero-energy-stadium-will-be-in-the-next-world-cup>

Photo Credit: Kelly Sato / CC BY 2.0

## Why Do Voluntary End Buyers Purchase Offsets?

VOLUME

VALUE

**Compliance carbon markets** are easy to understand: regulated corporations purchase offsets when they are cheaper than their mandated emissions reductions activities. But why do voluntary end buyers choose to buy offsets—spending anywhere from hundreds to millions of dollars—when they don't have to? For most buyers, there is no single answer. The decision to enter the carbon market is a combination of many factors – wanting to stand out among their peers for their commitment to the environment, appealing to customers, clients, and employees, or meeting a defined goal for reducing greenhouse gas emissions. Sometimes it has less to do with reducing carbon than with investing in projects that are doing good for the world. In fact, according to survey respondents, buyers for whom co-benefits had “some” or “major” influence over their decision to enter the market purchased over half (58%) of offsets sold in 2016. For forest carbon offset buyers, the beyond-carbon impacts are often of equal or greater importance than emissions reductions. The answer for every voluntary end buyer is much more nuanced than what we can collect in a survey; however, there are some general themes that can be identified.<sup>12</sup>

Notes: Circles represent the % of the volume (top) and value (bottom) of transactions for which the buyer's primary reason for purchasing offsets was the corresponding motivating factor. Based on survey responses representing 100 transactions and 12.0 MtCO<sub>2</sub>e transacted to end buyers.

### Climate Leadership

23%

Climate leaders are those who are pushing the limit for what companies or organizations can do to combat climate change. They may be the first in their sector or region to become carbon neutral or to provide funding for innovative emissions reductions projects. The most transactions, 30, were made to buyers seeking to demonstrate climate leadership. Fittingly, these buyers also led the way in paying the most per offset than any others, at an average of \$8.2/tCO<sub>2</sub>e. Thus, even though these buyers' purchases only made up 23% of the total volume—owing to a low average transaction size of 93 KtCO<sub>2</sub>e—their purchased offsets made up 44% of total tracked value.

44%

**Interface**, a carpet-maker, launched its “Cool Carpet” program to offset emissions from all stages of its carpets' life-cycle, from production to end use (including estimated emissions from vacuuming). While the Cool Carpet program purchases offsets for all carpets sold in North America, Interface continues to research ways to reduce emissions from the carpets themselves. The company recently announced a prototype carbon tile that encases plant-derived carbon into the tiles to help sequester carbon.\*

\*“Zeroing Out Greenhouse Gas Emissions,” Interface, accessed July 28, 2017, <http://www.interface.com/US/en-US/about/mission/Cool-Carpet>.

### Pursuit of GHG Targets

39%

Thousands of—if not more—companies have tried to show their commitment towards our climate by making emissions reductions targets. These can vary widely in both scope and ambition: some companies may only set targets for particular brands or products in order to appeal to carbon-conscious consumers; others may set goals that don't fully cover their carbon footprint. An initiative launched in 2015 hopes to change that. The Science Based Targets initiative encourages companies to adopt emissions reductions goals proportional to the impact needed to avoid a global, 2 degrees Celsius temperature increase. This commitment does not require the use of offsetting, but all companies that aim for carbon neutrality must turn to offsetting at some point.

34%

<sup>12</sup> Many of these themes are not mutually exclusive. We do, however, ask respondents to pick only one motivation that is best suited for that company.



Indeed, pursuit of GHG targets was one of the most commonly-cited reasons by end buyers for purchasing offsets. Respondents reported 23 transactions to end buyers who purchased primarily to meet a GHG target, and these purchases made up 39% of all offsets sold to end buyers. These buyers purchased the most offsets compared to buyers motivated by other reasons, averaging about 203 KtCO<sub>2</sub>e per transaction, compared with 114 KtCO<sub>2</sub>e overall. Paying an average of \$3.9/tCO<sub>2</sub>e, these buyers made up 34% of total value tracked among offsets with associated motivations.

**The National Australian Bank** (NAB) was the first carbon neutral bank in Australia, first certified under the country's National Carbon Offset Standard in 2010. Following its environmental reporting and offset management policy, the company purchases offsets from a mix of project locations and project types. In 2016, the company forward-purchased 218,918 offsets in anticipation of its 2017 emissions: NAB prefers to purchase offsets in advance in order to avoid last minute purchases that might have unfavorable prices. Because of its sustainability actions, like offsetting, the company believes that it has also helped attract new talent and retain employees.\* The company most recently (in late 2016) set a "science-based target" to reduce emissions 21% from 2015 levels by 2025.\*\*

\*\*"Carbon Neutral Stories," The Carbon Neutral Program, accessed July 28, 2017, <http://www.environment.gov.au/climate-change/publications/factsheet-nab>.

\*\*\*"Climate Change", National Australian Bank, accessed July 28, 2017, <https://www.nab.com.au/about-us/corporate-responsibility/environment/climate-change>.

## Pursuit of Climate-Driven Mission

21%

13%

While plenty of bottom-line companies exist in the world, many organizations do have missions beyond simply making profit. These missions can include a desire to make a positive impact on the environment, diversity, health, or, of course, the climate. Last year, 19 transactions were made to companies pursuing a climate-driven mission. These transactions made up 21% of all offsets sold but only 13% of total value, as companies paid an average of \$2.7/tCO<sub>2</sub>e.

When the Swedish burger chain **Max** looked at its carbon footprint, it found that its basic business model was the problem: cows emit a lot of greenhouse gases. In an about face, the company actively encourages consumers to purchase its leaner, non-cattle burgers or its veggie burgers. It offsets the rest of its emissions, while continuing to try and turn customers away from what was once its entire product.\*

\*\*"Carbon labeling and offsetting", MAX, accessed July 28, 2017, <http://www.maxburgers.com/Home/Sustainability/Carbon-offsetting>.

## Engage Customers/Clients to Offset Emissions Associated with Their Purchase(s)

12%

5%

In a sea of products and services, having a climate-neutral brand can help companies differentiate themselves. Many companies tout their climate friendliness to attract carbon-conscious customers. This can be done in a number of ways: by branding their entire company as carbon neutral, by branding specific products as carbon neutral, or by offering customers the option to make their product or service carbon neutral. For example, many transportation and mail services offer customers the option to offset their flight or letter delivery. These organizations bought offsets at an average of \$1.8/tCO<sub>2</sub>e, contributing to 12% of total volume but only 5% of total value associated with sold offsets.

Energy-provider **CenterPoint Energy Services** offers customers the opportunity to offset emissions from their natural gas purchases through a program called Green Balance. The Chestnut Place and Webster House apartments, one of many clients, recently started offering their renters the ability to offset through Green Balance, after they realized many renters were environmentally-conscious.\*

\*"Customers use CenterPoint Energy Services' carbon-neutral program to target green clientele," CenterPoint Energy, accessed July 28, 2017, <http://www.centerpointenergy.com/en-us/corporate/about-us/news/616>.

## Sustainable Supply Chain Development

3%

4%

Some buyers see an opportunity not just to improve the climate, but also their own business operations. While some buyers purchase offsets from projects near their operations (where employees may live), others look to source emissions reductions from projects that directly impact their supply chains (called "insetting"). Four transactions were made to buyers seeking to green their supply chain, totaling 3% of volume of offsets sold and 4% of the total associated value.

Swiss grocer **Coop** decided to "inset" by investing in a clean cookstove project for several Maasai villages in Kenya. The grocery store paid for 4,000 ovens that let the villagers cook while emitting fewer noxious fumes that are bad for both people's health and the climate. Many of the villagers work for a rose company called Oserian, which in turn sells roses to Coop.\*

\* "Stoves in Keyna – A good thing?" Coop, published January 19, 2015, [http://www.coopzeitung.ch/Oefen+\\_eine+gute+Sache](http://www.coopzeitung.ch/Oefen+_eine+gute+Sache).

**The Lower Zambezi National Park** became carbon neutral in 2016 to both attract eco-tourists and to preserve the park. The Zambian park and thirteen lodges (some in the park, some on the outskirts) purchased offsets from a **REDD+** project adjacent to the park. This project acts as a buffer zone against activities like poaching, illegal logging, and illegal charcoal production—activities which would threaten the attractiveness of the park to tourists as well as the health of the park.\*

\*"BioCarbon Partners Announces World's First Carbon Neutral National Park From Operations In Lower Zambezi, Zambia," Business Wire, published January 6, 2016, <http://www.businesswire.com/news/home/20160106005854/en/BioCarbon-Partners-Announces-World%E2%80%99s-Carbon-Neutral-National>.

## Promote Corporate/Organization/Staff Learning

1%

1%

<1%

Finally, some businesses view carbon offsetting as a way to interest staff and promote internal engagement with the environment. We tracked eight transactions associated with this motivation: these buyers purchased offsets representing 1% of the total volume and less than 1% of total value.

**Lantana Consulting Group**, a health-information consulting firm, decided to offset staff travel for 2015 and 2016. To do so, the company selected projects that met minimum standards and then let staff vote on their favorite projects. Staff chose to support a biogas waste-to-energy project, a clean cookstove project, and a methane capture project because of the strong associated co-benefits (and, for the methane capture project, because it is located in the US).\*

\*"Lantana Selects Cool Effects Projects to Offset Carbon Emissions," Lantana Consulting Group, published January 6, 2016, <http://www.lantanagroup.com/2017/01/19/lantana-selects-cool-effects-projects-to-offset-carbon-emissions/>.

## Climate Change Affects Business Model



Climate change can have dramatic effects on food security, infrastructure (particularly along coastlines), and many other sectors reliant on natural resources. A few businesses are taking steps to address climate change now, in the hopes of mitigating or averting some of the worst impacts yet to come. However, this motivation is not very widespread: last year, we tracked only four transactions made for this reason, at low volumes (only 24 KtCO<sub>2</sub>e total, which is less than 1% of all offsets sold with an associated motivation).

### Entergy

, a utility company that works along the US Gulf coast, was the first US utility to try and cap emissions back in 2001. The company is keenly aware about the threat climate change poses to its operations: in the aftermath of Hurricane Katrina in 2005, more than 75% of the company's customers were left without electricity as the hurricane tore down transmission lines, electricity poles and more. With hurricanes predicted to increase in severity in the future, Entergy focuses on both adapting to and mitigating climate change. The company has established a \$25M Environmental Initiatives Fund that spends 20% on purchasing carbon offsets and the remaining 80% helping Entergy's assets to become more energy efficient, increase production and more.\*

\*\*"Entergy's Environmental Initiatives Fund:15 Years," Entergy published 2016, [http://www.energy.com/content/environment/docs/eif\\_history.pdf](http://www.energy.com/content/environment/docs/eif_history.pdf).

## Anticipation of Direct Regulation



Perhaps the easiest motivation to understand is when companies purchase offsets in anticipation of a compliance market. If a sector or government plans to require companies to reduce emissions, some companies purchase voluntary offsets on a pre-compliance basis to familiarize themselves with offsets and get used to budgeting for offsets. Historically, we tracked many US and Australian buyers purchasing offsets before the start of both California's and Australia's cap-and-trade programs in 2013 but have not tracked much pre-compliance activity since then. That might change in the future: while only one buyer purchased offsets in anticipation of direct regulation last year, the buyer was an airline, presumably preparing for the launch of CORSIA (see box below).

### The International Civil Aviation Organization

(ICAO) has an industry-wide goal of carbon-neutral growth beginning 2020, meaning that the industry's net emissions will stop rising after 2020. To achieve this, ICAO plans to implement several approaches, one of which is offsetting. ICAO is starting to craft its own offsetting scheme, known as the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA). The details of the scheme remain to be negotiated, but once up and running, CORSIA will be the first global emissions reductions program covering an entire sector. However, some forward-thinking airport and airlines are already offsetting. For example, the Airport Carbon Accreditation accredits airports that are going carbon neutral. As of mid-2017, 190 airports in 59 countries were at various stages of the program.\*

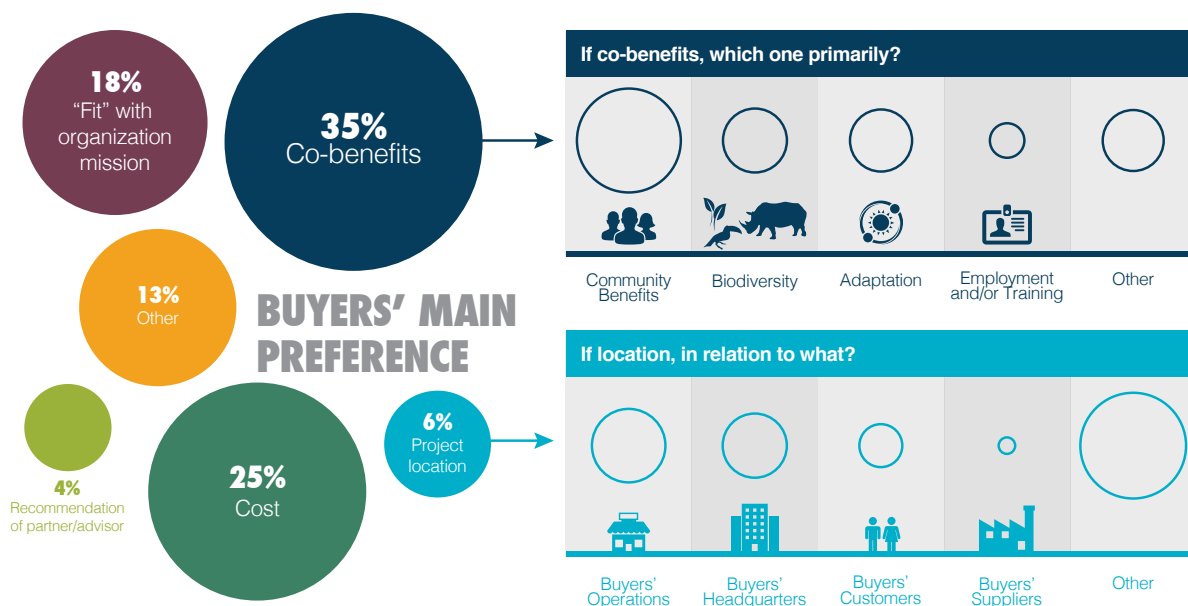
\*Airport Carbon Accreditation. accessed August 4, 2017, <http://www.airportco2.org/>

## How Do Voluntary End Buyers Choose Their Offsets?

Once a company, organization, or individual decides to purchase offsets, it must decide which offsets to buy. We found that buyers' main concerns when purchasing offsets were co-benefits (35%), cost (25%), and "fit" with the organization's mission (18%), followed by project location (6%) and recommendation of partners/advisors (4%), with "other" making up the remainder (13%). A project's fit with the organization's mission could be a combination of factors, including project type, co-benefits, location, and other preferences.

Co-benefits, or the "beyond carbon" benefits of carbon projects like community development or biodiversity preservation, was the most common main concern. Community benefits were cited as the most influential type of co-benefit in buyers' decision-making, followed by biodiversity and climate change adaptation. Many co-benefits are interrelated, and are even embedded in the project's operations. In fact, project developers often say they could not deliver climate results without also addressing issues such as local economic development, poverty alleviation, and land tenure reform. For instance, by providing clean energy, renewable energy projects help communities prepare for and adapt to a low carbon future that is not dependent on fossil fuels. By protecting biodiversity, especially for species threatened by climate change, and providing earned income for communities, forest carbon projects can help ecosystems and communities adapt to a changing climate.<sup>13</sup>

Figure 7: Share of Offset Volume by Buyer Preference When Choosing Offsets



Notes: Based on survey responses representing 16.8 MtCO<sub>2</sub>e transacted to end buyers. Of those, 6.1 MtCO<sub>2</sub>e also include a specified co-benefits preference and 2.6 MtCO<sub>2</sub>e have specified a location preference.

For buyers concerned with community benefits and biodiversity, forestry and land-use offsets from Latin America and Africa were most common, while buyers interested in adaptation mainly purchased renewable energy offsets from Asia. Projects that place a strong emphasis on co-benefits tend to be certified with standards such as Plan Vivo, the Gold Standard, or the Verified Carbon Standard with the Climate, Community, Biodiversity (CCB) add-on, which incorporate metrics for co-benefits alongside carbon.

Low cost was the second-most common concern for buyers, with roughly a quarter (25%) of offsets purchased due primarily to their cost. The main project types for cost-focused buyers were renewable energy and gases,

<sup>13</sup> Intergovernmental Panel on Climate Change. "Adaptation Opportunities, Constraints, and Limits." In *Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, (Cambridge: Cambridge University Press, 2014), 899-943.

primarily from North America (55%) and Asia (38%). Transaction sizes by these buyers tended to be larger, with lower average prices (\$2.1/tCO<sub>2</sub>e).

Buyers' main concerns when purchasing offsets differed depending on their type of company or organization. For multinational corporations, which purchased the largest share of offsets, cost was the driving factor for 30% of offsets sold, though co-benefits (27%) and fit with the organization's mission (22%) were also common. Multinationals whose main concern was cost tended to purchase a higher volume of offsets than those with other concerns. The 14% of multinationals whose main concern was cost purchased 30% of the total volume bought by multinationals, while the 36% most concerned with co-benefits purchased just 27%. Domestic corporations were generally more concerned with co-benefits. Domestic corporations whose main concern was co-benefits accounted for 56% of the volume purchased by that group. Interestingly, twice as many domestic corporations were primarily concerned with cost than co-benefits, but lower transaction volumes meant that cost-focused buyers accounted for just 29% of all offsets sold to domestic corporations.



Co-benefits, such as community benefits and biodiversity protection, is one factor that influences which offsets buyers purchase. Photo Credits (clockwise from top left): Gustavo Frazao/Shutterstock; Maren Barbee/Flickr (CC BY 2.0); US Army Africa/Flickr (CC BY 2.0); Iya Yakubovich/Flickr (CC BY 2.0).

## How Much Supply Is Available? How Many Offsets Do End Buyers Purchase?

This report has so far focused on transactional data, that is, the buying and selling of carbon offsets. However, the offset lifecycle extends beyond transactions to include broader supply-demand dynamics around offset **issuance** and retirement. Issued offsets are those offsets that have been verified by a standard organization as having an emissions reductions impact. Each issued offset receives a unique serial number, which can then be traded to intermediary and end buyers. To guarantee an offset isn't double counted (by buying and reselling), it must be retired before being used to meet an emissions reductions target. Retired offsets are those offsets no longer able to be traded on the market, and the carbon represented by these offsets is therefore considered permanently "removed" from the atmosphere. After an offset is retired, a company or individual can claim that offset against their own emissions.

All offsets that have been verified by a third-party standard are tracked on registries from issuance to retirement. By collecting data from the standard body websites and from the registries, we found that offset issuances in total contracted to 35.3 MtCO<sub>2</sub>e in 2016—a 21% decrease from 2015. Offsets issued by CAR contracted the most (65%), followed by ACR (39%). While offsets issued by VCS also contracted, it was by a much smaller margin (11%). In contrast, both the Gold Standard (4%) and Plan Vivo (31%) increased voluntary carbon offset issuances.

### Voluntary-Compliance Market Dynamics

In 2016, both CAR and ACR issued fewer voluntary offsets than in 2015—and California's compliance cap-and-trade program is part of the explanation. Three standard bodies (ACR, CAR, and VCS\*) have been approved by the California Air Resources Board to issue offsets eligible for the California compliance market. In 2016, the majority of offsets issued by ACR and CAR were offsets eligible for the California compliance market, called Registry Offset Credits (ROCs). The California's Air Resources Board has final regulatory say over which offsets may be re-issued into its cap-and-trade program: once they have been approved, ROCs must be cancelled on the ACR and CAR registries and then re-issued as Air Resources Board offset credits (ARBOCs) that can be sold to California compliance entities.

Last year, ACR issued 25.8 MtCO<sub>2</sub>e ROCs eligible for the California market (compared to only 1.3 MtCO<sub>2</sub>e eligible for the voluntary markets), while CAR issued 9.7 MtCO<sub>2</sub>e ROCs (compared to 3.9 MtCO<sub>2</sub>e of voluntary offsets). Just because an offset is eligible to be re-issued as an ARBOC, doesn't mean that it is re-issued right away as the ARB may take several months to approve eligible projects. Of the ROCs issued in 2016, project developers canceled 11.9 MtCO<sub>2</sub>e from ACR and 8.5 MtCO<sub>2</sub>e offsets from CAR for re-issuance as ARBOCs in California's market.

While VCS did not report any offsets canceled for use in California last year, 4.9 MtCO<sub>2</sub>e offsets were canceled for use in Colombia's voluntary carbon market platform.\*\* Right now, the program allows Colombian businesses to use voluntary carbon offsets from anywhere in the world, but will soon limit it to Colombian-based offsets only in 2018.

The UN-led Clean Development Mechanism (CDM) also canceled offsets in 2016: instead of cancelling offsets for use in a compliance program, 2.4 MtCO<sub>2</sub>e offsets were canceled for voluntary use.\*\*\* Theoretically, all CDM-offsets should be used for compliance purposes, yet many voluntary buyers have historically bought and retired non-canceled CDM offsets. The 2.4 MtCO<sub>2</sub>e canceled for voluntary use thus only represent a minimum of potential CDM offsets voluntarily used.

\*VCS did not issue any offsets eligible for the California market in 2016.

\*\*We included voluntary cancellations for Colombia's voluntary market in our totals for VCS retirements, since those offsets are still used in a voluntary market. We do not include canceled offsets intended for California's compliance market in our retirement totals for VCS, ACR or CAR.

\*\*\*We did not include CDM cancellations in our voluntary offset retirement figure, as we did not want to assume that every offset cancellation led to that offset's retirement. In some cases, project developers will cancel offsets from the CDM and convert their offsets to a voluntary standard, such as the Gold Standard or VCS. In these cases, the project developers would still need to find a voluntary buyer before their converted offsets are retired.

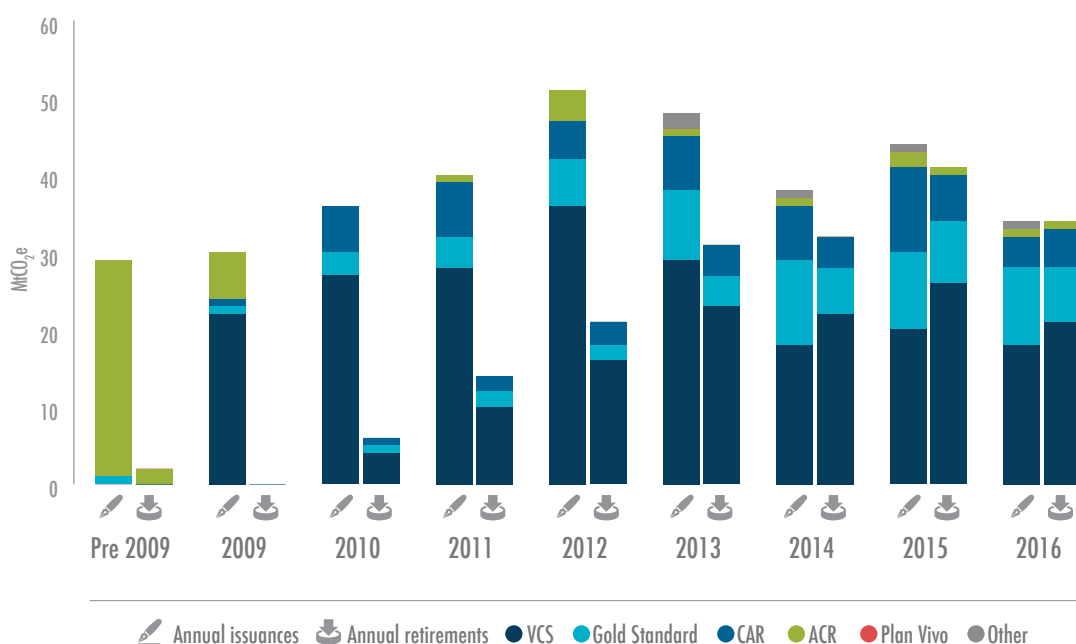
Following an offset's issuance, the offset can then be bought and sold more than once before being retired. An offset is retired when an end buyer purchases the offset with the intent to claim that emissions reduction as their own. In some cases, a project developer sells an offset to an end buyer, who then immediately retires the offset. More commonly, however, project developers will issue offsets and then sell some of those offsets to an intermediary. The intermediary may then sell those offsets at a later date to an end buyer who may or may not retire the offsets straight away.<sup>14</sup> In other cases, the project developer issues an offset but can't find a buyer. These are only a few reasons as to why there is a difference in total offsets issued and retired over the years.

Following a record high in 2015, voluntary offset *retirements* contracted 16% to 34.8 MtCO<sub>2</sub>e. Yet this represented the second-highest number of offsets retired in any year since registries started tracking retirements. The majority (21.4 MtCO<sub>2</sub>e) of offsets retired were developed under VCS, 17% of which had an associated co-benefit certification under CCB or SOCIAL CARBON. These offsets predominately came from energy (53%) or forestry and land-use (31%) projects, mostly from Africa (Kenya, Sierra Leone) or Asia (Thailand, Indonesia).

The remainder of retired offsets were mostly split between the Gold Standard (7.1 MtCO<sub>2</sub>e) and CAR (4.9 MtCO<sub>2</sub>e). Buyers retired most Gold Standard offsets from wind and clean cookstove projects, from Asia (China, India), Eastern Europe (Turkey) and Africa (Uganda, Ghana). Meanwhile, buyers retired CAR offsets sourced exclusively from the US (many offsets coming from Texas, California, Georgia, and Illinois) and from landfill gas and nitric acid projects.

While offset issuances and retirements are important market indicators (giving insight into supply and demand for offsets), neither should be taken completely at face value. While an issued offset represents 1 tCO<sub>2</sub>e avoided or sequestered, many projects only issue offsets when they have a buyer (since issuances cost money). Thus, issuance volumes for 2016 represent only a minimum amount of supply available. Similarly, retired offsets are also not always an effective indicator of demand, since many buyers do not retire their offsets immediately upon receiving them. Offset issuance, transactions and retirements must therefore be taken together to form an overall picture of market health and trends.

Figure 9: Offset Issuances and Retirements by Standard, Pre-2009 through 2016



Notes: Based on annual issuance and retirement data from the Verified Carbon Standard (VCS), the Gold Standard, the Climate Action Reserve (CAR), the American Carbon Registry (ACR), and Plan Vivo. Data acquired from Markit and APX offset registries.

<sup>14</sup>While there is a general consensus in the carbon offset community about the value of retiring carbon offsets, this was not the case when the market took off in the early to mid-2000s.

## Debunked: Four Myths About Carbon Offsetting

### MYTH 1: Companies that buy offsets are just buying their way out of their obligations.

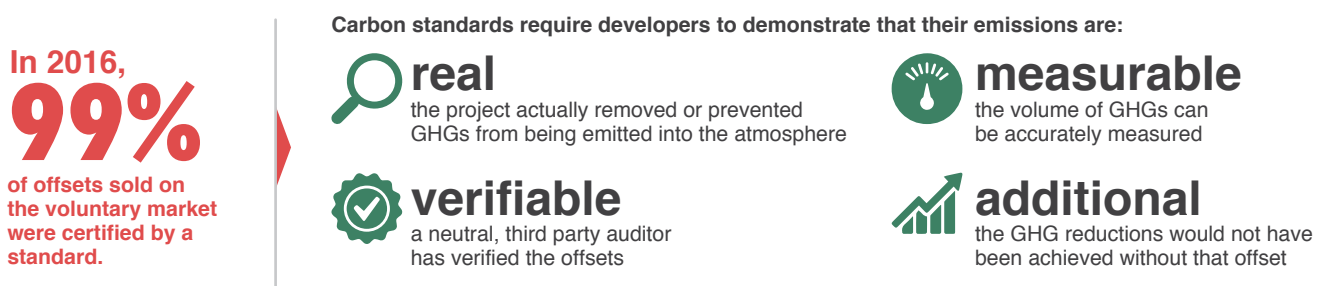
Our research shows the opposite: namely, companies are purchasing offsets as one of many ways to fulfill their carbon reduction obligations. Those companies that do buy offsets are doing so as part of an overall carbon-management strategy and they mostly use offsets to tackle emissions they can't eliminate internally. Some companies, like Disney and Microsoft, have created an internal "price on carbon," where the company charges itself for every tonne of carbon it produces and uses that income to purchase offsets. The idea is that incorporating carbon into the company's bottom line will focus attention on emissions and accelerate reductions.



Notes: Based on Forest Trends' Ecosystem Marketplace's Buying In report, which uses 2014 CDP data.<sup>15</sup>

### MYTH 2: Offsets don't represent real reductions.

In the early days of carbon markets in the early 2000's, voluntary offset quality was a mixed bag—some projects were well-planned and some were not. A few unscrupulous "carbon cowboys" made headlines after their offsets were found to be double-counted or illegitimate. But carbon markets have come a long way since then.



Notes: Based on transactions representing 48.8 MtCO<sub>2</sub>e in the State of the Voluntary Carbon Markets 2017 report.

<sup>15</sup>Allie Goldstein, *Buying In: Taking Stock of the Role of Offsets in Corporate Carbon Strategies*. (Washington, DC: Forest Trends, 2016).



### MYTH 3: Offsetting barely makes a dent—it's not sufficient for the large-scale change we need.

This one might be sort of true, but that's because offsets are designed to be part of an overall reduction strategy and not a substitute for one. Companies surveyed in the report typically offset less than 2% of their total emissions, usually because they're using offsets to compensate for just one segment of that total, like employee travel or the carbon footprint of a single product. Even the small percentage, however, represents a tangible impact on the climate. As more companies sign on to initiatives like the Science Based Targets or the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), the percentage of emissions they offset may go up.

**The over 140 MtCO<sub>2</sub>e in offsets reported to CDP in 2014 had the equivalent impact of taking 30 million cars off the road for a year.**



### MYTH 4: Offsetting is niche or arcane.

A lot of prominent brands use offsetting, including household names like General Motors, Delta Air Lines, and Microsoft, all of whom were among the top five buyers on the voluntary market in 2014.

Of the nearly 2,000 companies who publicly disclosed emissions data to CDP in 2014, 248 (17%) invested in projects to reduce carbon emissions outside of their immediate operations.

**Of the 140 MtCO<sub>2</sub>e in offsets reported to the CDP, companies purchased nearly 40 MtCO<sub>2</sub>e (with the remaining companies either producing offsets for sale externally or offsetting internally within their supply chain). This is equal to the carbon sequestered by 1 billion tree seedlings grown over 10 years.**



## Conclusion

The voluntary carbon market is, by definition, driven by buyers. Who buys carbon offsets and why, what activities they choose to offset, and how they select their offsets shapes the market.

Many trends around buyer profiles and motivation remain similar to those tracked in previous years, as returning buyers purchased nearly all—94%—of offsets in 2016. While new buyers purchased smaller volumes, they were responsible for 30% of all transactions—indicating their interest in “trying out” the voluntary carbon markets, but not on a large scale.

The bulk of buyers remain concentrated in North America and Europe and typically represent for-profit organizations from the energy, finance/insurance, consumer goods, and events/entertainment industries. Although offsets are produced around the world, there has not been significant interest from potential buyers in Asia, Africa, or Latin America—yet.

Most buyers purchased voluntary offsets out of a desire to demonstrate climate leadership or to meet their organization's emissions reductions targets. The latter has gained visibility in recent years, as programs like the Science Based Targets challenge companies to make emissions reductions ambitious enough to limit climate change to 2 degrees Celsius instead of setting other, in some cases less-rigorous, targets. Finally, while many buyers remain price-conscious, they purchased the majority of offsets last year based on the offsets' co-benefits.

All these trends should be viewed within the context of the global economic and political situation, specifically around climate change and compliance carbon markets.

Ten years after the Kyoto Protocol became active, a new climate change agreement has come into force. The Paris Agreement, negotiated in 2015, calls on every country to set their own emissions reductions targets. As of mid-2017, the Agreement has been ratified by 155 countries representing 68% of global emissions. As countries continue to figure out how to achieve their GHG reduction targets, carbon pricing and emissions trading programs are emerging around the world. According to a recent World Bank report, there are a total of 42 national-level carbon pricing initiatives either currently implemented or scheduled for implementation worldwide.<sup>16</sup>

How these markets and pricing mechanisms will impact voluntary carbon markets remains to be seen. It depends, in part, on the details of the regulation—which sectors (and current voluntary buyers) will be covered under these programs and which segments of their emissions are included (Scope 1, 2, or 3). It also depends on the buyers themselves. Will companies in sectors not covered under emissions trading programs still choose to voluntarily offset? For companies that are covered, would they offset the parts of their operations not covered?

Another notable event in the global fight on climate change is the US White House's decision to withdraw the second-largest global contributor of greenhouse gases from the Paris Agreement. The decision has prompted a flurry of commitments from US state, regional, and local governments, colleges and universities, and private sector companies to redouble their efforts to reduce emissions as part of the “We are still in” declaration.<sup>17</sup> These signatories have pledged to work with the international community in keeping the global temperature rise below 2 degrees Celsius. A follow-on initiative by Bloomberg Philanthropies, called “America's Pledge,” promises to report on these commitments and create a roadmap for increasing the US transition to a low-carbon future.

Both initiatives are currently sparse on the details of what organizations are pledging and how they will implement their promises. However, they could lay the foundation for a future US “carbon club”—a term first floated after governments worldwide committed to the Paris Agreement, which advocates multiple, bottom-up approaches to combating climate change.

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<sup>16</sup>World Bank and Ecofys. 2017. “Carbon Pricing Watch 2017.” (May), Washington, DC: World Bank. <http://www.ecofys.com/files/files/world-bank-ecofys-carbon-pricing-watch-2017.pdf>.

<sup>17</sup>Riley, Tess. “Just 100 companies responsible for 71% of global emissions, study says.” The Guardian. July 10, 2017. <https://www.theguardian.com/sustainable-business/2017/jul/10/100-fossil-fuel-companies-investors-responsible-71-global-emissions-cdp-study-climate-change>.

The idea behind carbon clubs is that nations with similar carbon markets can and should link up to achieve greater market efficiency, instead of trying to agree on worldwide rules around a global carbon market. This has already occurred with airlines around the world under the CORSIA program and at the sub-national level in North America, with the bi-lateral market linkage of California and Québec's carbon markets. Theoretically, a carbon club could cut across US governments (except the national government), corporations and universities, while providing a more structured, and potentially binding, framework to ensure participants have similar levels of ambition in their low-carbon action and requiring financial input to achieve their goals. Since these potential commitments would be voluntary, there may be an associated increase in voluntary carbon offset demand as well.

One thing is clear—the world is recognizing that national governments alone cannot prevent climate change. Solutions must involve everyone—local and regional governments, individuals, and especially the private sector, which is responsible for the majority of global emissions. As members of every sector continue to measure, reduce, and offset their emissions, carbon offsetting continues to play a critical role in the fight against climate change.



Farms, forests, and settlements in Thailand.

Photo Credit: Praethip Docekalova / Alamy Stock Photo

## Our Supporter



Good Energies Foundation ([www.goodenergies.org](http://www.goodenergies.org)) supports sustainable systems that can prevent poverty and disruption caused by climate change in the Global South. Good Energies Foundation was established in 2007 and founded as an integral part of Good Energies Inc., a private equity company specialised in investing in the renewable energy and energy-efficiency industries. Good Energies Foundation's historical mission is the alleviation of future poverty in the Global South by mitigating climate change. Good Energies Foundation initially leveraged its know-how in solar photo-voltaic to provide access to clean energy, especially in the area of rural electrification. At a later stage, climate-change related solutions were added to the portfolio, including sustainable reforestation models. As temperatures rise, we believe that innovative solutions are urgently needed to prevent the future displacement and impoverishment of the world's most vulnerable populations.

## Our Sponsors



BCP (BioCarbon Partners) is one of the leading African-based forest carbon offset development companies in the REDD+ (Reducing Emissions from Deforestation and Degradation) sector. BCP's mission is making forest conservation valuable to people. BCP focuses on achieving long-term conservation solutions for African dryland forests, through local presence, community empowerment and strong partnerships. Our REDD+ activities are validated and verified to the highest of international standards and include the VCS verified Lower Zambezi REDD+ Project in Zambia (CCBA triple gold Validated). BCP is also developing a large-scale REDD+ activity in Zambia's Luangwa Ecosystem through the 5 year USAID-funded Community Forests Program. BCP combines an entrepreneurial approach with a core philosophy of caring for people and environments to catalyze deforestation reduction in ecosystems of global biodiversity significance. More information about BCP can be found at [www.biocarbonpartners.com](http://www.biocarbonpartners.com).



Numerco is an award-winning independent energy and commodities company with a leading reputation in the renewable and carbon industry. Dedicated to reducing the impact of climate change, Numerco has a global reach extending beyond 30 countries, sourcing sustainable products from more than 200 partners and delivering them to organisations to meet their environmental goals. Specialising in international voluntary markets with an in-depth knowledge of regional programmes and industry-wide schemes, Numerco offers customers unparalleled access to the evolving environmental commodity markets. All products are certified to accredited standards and frameworks including CDM, VCS, Gold Standard, CAR and RECs.

Numerco provides a reliable and transparent platform to source products used to neutralise or reduce greenhouse gas emissions and present them effectively and efficiently to valued customers. The company's direct engagement throughout the process has wider social and economic benefits to communities involved in the projects and our extensive expertise and knowledge enables the development and financing of new projects. Founded in 2013 and based in London, Numerco has won awards three years consecutively from Environmental Finance Magazine. Visit [www.numerco.com](http://www.numerco.com) for more information.



The BioCarbon Fund Initiative for Sustainable Forest Landscapes (ISFL) is a multilateral fund, supported by donor governments and managed by the World Bank. Established in 2013, it promotes reducing greenhouse gas emissions from the land sector, from deforestation and forest degradation in developing countries (REDD+), and from sustainable agriculture, as well as smarter land-use planning, policies and practices. The ISFL supports programs in Colombia, Ethiopia, and Zambia. An additional program in Indonesia is under consideration.

The project-level initiative of the BioCarbon Fund was established in 2004 as a public-private sector initiative managed by the World Bank to support afforestation/reforestation as well as sustainable agricultural management projects through the purchase of emission reductions or carbon credits. Most of the projects supported by the Fund are registered with the UNFCCC's Clean Development Mechanism (CDM), while some including the first REDD+ initiative in Africa (Madagascar CAZ REDD project) and the Kenya Agricultural Carbon project are associated with Verified Carbon Standard (VCS).

BioCarbon Fund has over 20 projects located in 16 countries spread across five continents and they have been pioneers in demonstrating the generation of multiple revenue streams through a combination of financial returns from the sale of carbon credits with increased local incomes and productivity from sustainable land management practices. More information about the BioCarbon Fund can be found at [www.biocarbonfund.org](http://www.biocarbonfund.org).







# Pioneering Finance for Conservation

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## **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 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)