

Sharing the Stage

State of the Voluntary Carbon Markets 2014

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State of the Voluntary Carbon Markets 2014

A Report by Forest Trends' Ecosystem Marketplace

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July 2014

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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 sponsorship of EcoAct and Santiago Climate Exchange, as well as ongoing support from the World Bank Program on Forests (PROFOR).

The production of this report has also required insights, time, and support from dozens of people. They include Duncan Abel, David Antonioli, Obadiah Bartholomy, Ollie Belton, Kathy Benini, Simon Bennett, Jeff Bernicke, Giulio Berruti, Keith Black, Louis Blumberg, Derik Broekhoff, Lucio Brotto, Martina Burri, Ed Canady, Aldo Cerda, Trish Chartrand, Michael Dantoni, Kristel Dorion, Brent Dorsey, Joanna Durbin, Kathleen Edie, Gabriel Eickhoff, Martin Ewald, Dirk Forrister, Gary Gero, Andrew Goldberg, Roberto León Gómez Charry, Mary Grady, Jason Gray, Sophy Greenhalg, Myles Guy, Edward Hanrahan, Lauren Hauber, Zhuli Hess, Joanne Hochheiser, Andres Huby, Toby Janson-Smith, Josh Kempinski, Dick Kempka, Brian KillKelley, Mike Korchinsky, Pier Kuehn, Lars Kvale, Dee and Richard Lawrence, Seung-hyun Lee, Alexis Leroy, Sarah Leugers, Daisy Lilley, Camilla Lopes, Sarah Mack, Aya Marabini, Gerald Maradan, Grattan MacGiffin, Stephen McComb, Brian McFarland, Pieter van Midwoud, Belinda Morris, Daniel Nepstad, John Nickerson, John O'Connor, John O' Niles, Yves C. Paiz, Jason Patrick, Tanya Petersen, Jim Procanik, Matt Ramlow, Debbie Reed, Julian Richardson, Adrian Rimmer, Alessandro Riva, Andrea Rumiz, Rajinder Sahota, Dipjay Sanchania, Steve Schwartzman, Jonathan Shopley, Derek Six, Matt Spannagle, Chris Stephenson, Jeff Swartz, Naomi Swickard, Carlo Figà Talamanca, Andre Templeman, William Theisen, Kevin Townsend, David Tulauskas, Gareth Turner, Jennifer Tweddell, Mariama Vendramini, Chandler van Voorhis, Jun Watanabe and other members of Japan's Overseas Environmental Cooperation Center (OECC), Sean Weaver, Jennifer Weiss, Vicky West, Troy Wiseman, Gareth Wishart, Zubair Zakir, and Wenjie Zhuang.

A special thank you to Michael Jenkins for his guidance and to the staff at Forest Trends' Ecosystem Marketplace.

Cover, layout, and graphics by Eszter Szöcs of Visilio Design (www.visilio.com).



Layout design by Daniela Vizcaino (danielavizcainodesign.com)



Executive Summary

Experts invoke the term “anthropocene” to informally describe the current era in which human activities, and especially anthropogenic climate change, are making an irreversible ecological mark. In response, countless companies, countries, and citizen consumers hoping to derail the most dangerous climate scenarios voluntarily took direct and indirect climate action in 2013 – including buying carbon offsets worth \$379¹ million to lock 76 million metric tonnes (MtCO₂e) of greenhouse gases (GHGs) out of the atmosphere.

Last year, voluntary carbon offset buyers threw their collective weight behind climate-led development. With many of these buyers driven to altruistically “combat climate change” through their purchases, 2013 saw a record volume of offsets transacted from

projects that deliver climate and community-facing outcomes (“co-benefits”) in developing countries.

Buyers prioritized support to projects that de-carbonize energy, plant or protect forests, or save lives by

Box 1: KEY REPORT FINDINGS

- Across all years of market activity tracked in this report series, voluntary buyers have directly funded 844 MtCO₂e in emissions reductions worth \$4 billion, at an average historical price of \$5.9/tCO₂e.
- In 2013, offset suppliers transacted 76 MtCO₂e of carbon offsets – down from 102.8 MtCO₂e in 2012 – as structural changes in California’s carbon market impacted millions of previously “voluntary” tonnes. Market value fell to \$379 million, tracking alongside lower average prices (\$4.9/tCO₂e market-wide).
- The volume of offsets transacted directly from projects – and as a result, through brokers – steeply declined (down 40% and 58% from 2012, respectively). Retailer sales were unchanged (22 MtCO₂e).
- Governments played an important market role in 2013, as both offset buyer and supplier, while private sector-led offset demand fell by 46% to 35 MtCO₂e. A full 20.3 MtCO₂e was attributed to multinational corporate buyers. Energy, transportation, finance, and insurance providers were also key buyer types.
- “Combating climate change” was cited as buyers’ top offsetting motivation – behind 7.2 MtCO₂e in transactions. Corporate responsibility and leadership remained prominent motives. Buyers also leveraged offset payments to incentivize supply chain sustainability (a first in this report series).
- Existing client demand drove 76% of transacted volumes in 2013. First-time buyers made up the remaining 24%, but paid significantly below-average prices (\$3.7/tCO₂e) and with a focus on forestry.
- Projects that reduce emissions from deforestation and forest degradation more than doubled their transaction volumes to 22.6 MtCO₂e, and their market value also increased by 35% to \$94 million. This growth came at a (lower) offset price of \$4.2/tCO₂e, down from \$7.4/tCO₂e in 2012.
- Around 28.9 MtCO₂e of 2013’s transactions were associated with the Verified Carbon Standard. Market share for the Gold Standard saw little change from 2012, despite voluntary buyers’ increased appetite for Clean Development Mechanism instruments.
- Survey respondents reported 31.8 MtCO₂e in their project portfolios that remained unsold at the end of 2013, including 12.6 MtCO₂e reported by 36 suppliers that tried to but simply did not find a buyer by year’s end. Survey respondents also projected a potential pipeline of 277 MtCO₂e through 2018.

¹ All prices are noted in US Dollars, unless specified otherwise.

BOX 2: New climate, new markets – the voluntary carbon offsetting context

On May 9, 2013, the concentration of carbon dioxide (CO₂) in the atmosphere surpassed 400 parts per million for the first time in recorded history. The milestone was equally expected and terrifying. The United Nations Framework Convention on Climate Change (UNFCCC) negotiates on the premise of limiting global temperature rise to two degrees Celsius (the warming that scientists have deemed acceptable for Earth's climate) yet few experts still view this boundary as realistic.

Balancing the carbon equation is arguably the greatest challenge of our time and is, at its root, an economic problem. Developed country economies grew up on a diet of GHGs that is now challenging to curtail, while developing countries struggle to finance an alternative, “low-carbon” path to economic dignity. Markets that fail to acknowledge (or “externalize”) the environmental and social costs of GHG emissions contribute to climate change, but those that internalize these costs can play a powerful role in keeping atmospheric GHGs in check by creating incentives for emitters to curb emissions and financing activities that sequester, avoid, or reduce GHGs.

Certain characteristics of greenhouse gases lend themselves to a market-based approach. First, CO₂ and other GHGs are global pollutants, meaning that a tonne of CO₂ released from a smokestack in China has the same warming effect on the atmosphere as a tonne of CO₂ released from deforestation in the Amazon. Second, GHGs can be defined in discrete, measurable units equivalent to one tonne of carbon dioxide equivalent (tCO₂e) and can thus be traded like currency. Carbon markets are built on these two principles.

The voluntary carbon market – the subject of this report – encompasses all payments for third-party emissions reductions, called “offsets,” that occur outside of government regulation. Since carbon is a global pollutant, these offsets, each measured as one tCO₂e, may be sourced from anywhere in the world and come from diverse activities, from producing wind energy in India to capturing methane from a Canadian landfill to distributing cleaner-burning cookstoves in Rwanda.

Organizations of any kind, and individuals, too, can then purchase these emissions reductions to offset – or balance out – their own emissions. This can create economic efficiencies in that it allows the least expensive emissions reductions to occur first – with an equivalent benefit to the global climate. The voluntary carbon market often serves as a testing ground for project types and monitoring methodologies that are eventually adopted in compliance-driven carbon markets (i.e., “compliance markets”) in which emissions are capped or taxed through regulation. It also creates a space for “first movers” to act ahead of national or international climate policy.

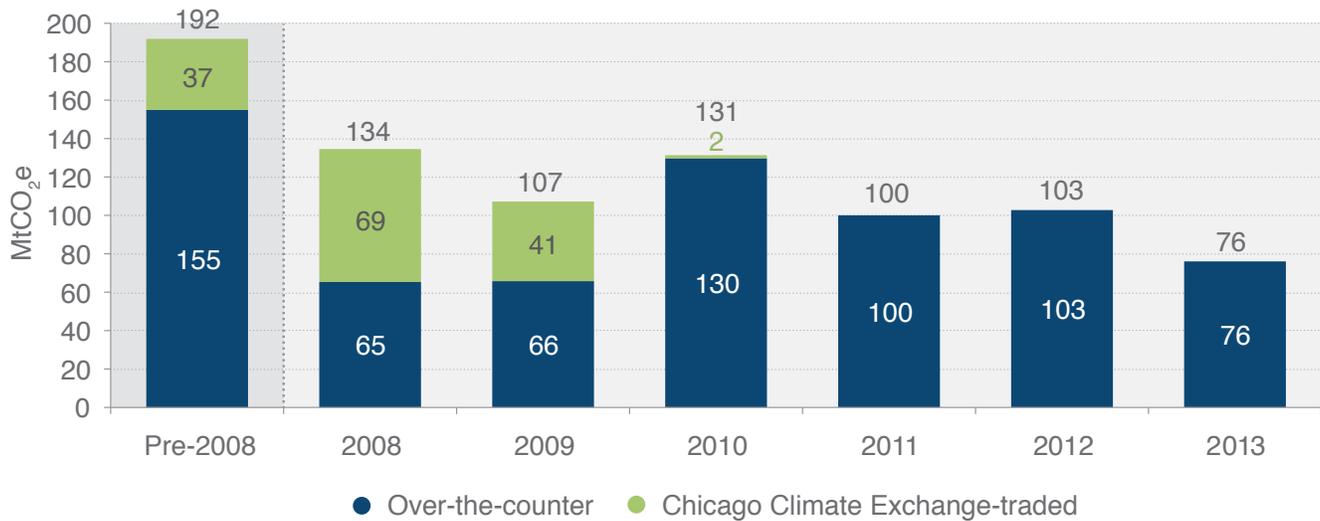
This report tells the story of voluntary carbon offsetting in 2013, but behind the facts and figures are the hundreds of individual transactions between buyers and sellers. Some of these buyers and sellers may never meet each other, but others do – such as a shipping representative from Singapore who traveled to a threatened forest in Paraguay to meet the people who will receive carbon payments from his company. These human interactions aren't the goal of the voluntary carbon market, but they're indicative of the idea that an unprecedented, global problem requires creative, global solutions.

distributing cleaner cooking devices – with no expectation that their offsets could also be used to comply with carbon regulations. This starkly contrasts with all previous market years when voluntary efforts to influence or prepare for future regulations (aka “pre-compliance”) drove 3 to 16 percent of global offset purchases.

One of the most prominent of these emerging regulations, California's carbon market went live last year, taking with it millions of offsets that were once positioned for voluntary use but are now eligible for compliance use.² The market's launch and recognition of offsets heralds a win for influencers

² These offsets are therefore no longer tracked in this report series unless reported as sold to voluntary buyers.

Figure 1: Historical Market-Wide Voluntary Offset Transaction Volumes



Notes: Based on responses representing 76 MtCO₂e in transacted offset volume.

Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

Figure 2: Historical Market-Wide Values and Average Prices



Notes: Based on responses representing 76 MtCO₂e in transacted offset volume.

Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

that worked through the voluntary offset market to shape regulation design.

If one subtracts from market totals the sizable offset demand attributed to California market actors in recent years – and accounts for muted pre-compliance offset demand in markets like Australia and the United States (nationally) – the limited scale of purely voluntary action alone was increasingly

evident last year, when three of every four offsets transacted were sold to pre-existing clients.

Market size would have shrunk more sizably were it not for the entrance of new public sector market actors directing their confidence in market-based climate finance mechanisms toward non-traditional projects and programs. These public entities are redefining “voluntary action” as they experiment with

Figure 3: Market Size and Average Price Comparison, 2012 and 2013

	2012	2013	% change	All years
Volume:	103 Mt	76 Mt	↓ 26%	0.8 Bt
Value:	\$523 M	\$379 M	↓ 28%	\$4 B
Average \$:	\$5.9/t	\$4.9/t	↓ 16%	\$5.9/t

Notes: Based on responses representing 76 MtCO₂e in transacted offset volume.

Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

government-to-government carbon payments beyond the scope of traditional United Nations (UN) processes; or voluntarily commit to pay above-market prices to projects navigating crippling compliance market dynamics;³ or support private offset projects with public resources in order to send a signal to investors.

Private buyers, too, were re-invigorating existing commitments by introducing sophistication and a stronger business case into their existing offset programs. For some, that meant imposing an internal price on carbon that in turn funds their offset purchases, while others are engaging directly with projects to pioneer new methods to reduce and account for carbon emissions – producing offsets that the same company will ultimately buy. For the first time, this year's survey also tracked buyers utilizing carbon offset payments to incentivize practice change among producers in their supply chains, as well as to create new ways to engage with customers and clients around consumer offsetting solutions that relate to companies' climate risks.

These changes had major implications for the standards bodies that coordinate project and offset certification. Attention to measuring and delivering on public development objectives intensified, while in forestry circles public sector emphasis on scalable finance drove actors to explore mechanisms that accounted

for the full landscape of interventions, actors, and impacts. Large-scale forest carbon certification also united some experts and multinational corporations to explore potential efficiencies between carbon project and agricultural commodity certification.

These and other findings are described in this eighth edition of the *State of the Voluntary Carbon Markets* report series, which each year is informed by hundreds of responses to our annual global survey of offset providers. Each of these providers responds on behalf of a unique portfolio of carbon offset projects and voluntary demand drivers. This report weaves those responses into a coherent plot that finds market actors exiting or debuting on the global stage with offset innovations that increasingly defy traditional characterization in hopes of attracting a growing audience of buyers and investors to their cause.

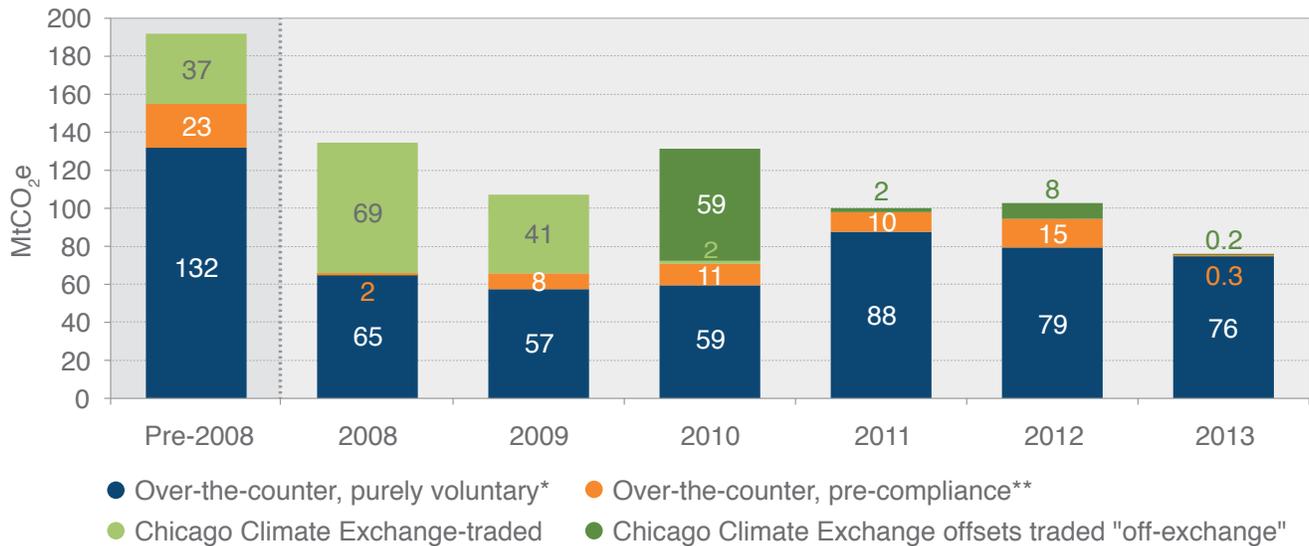
Offset Demand Descends Amidst Market Transition, Oversupply, Slow Economies

Following several years marked by only slight variations in voluntary demand, offset suppliers reported a sharp decline in both market size and average price in 2013. Last year, the market contracted⁴ 76 MtCO₂e of carbon offsets for immediate or future delivery. As such, the global

³ Despite governments' commitment to voluntarily pay projects above-market offset prices, these offsets are nonetheless utilized for compliance purposes and so not included in 2014 voluntary offsetting report data.

⁴ This report collects data at the point that a contract is signed or terms of payment and delivery are otherwise agreed. Throughout this report, "transacted" and "contracted" are used interchangeably to describe these agreements.

Figure 4: Historical Comparison of Purely Voluntary and Pre-Compliance Transactions



Notes: Based on responses representing 76 MtCO₂e in transacted offset volume (2013); 0.8 BtCO₂e (all years).

*Defined as all offsets transacted for the purpose of retirement.

**Defined as all offsets transacted for resale to or use by future regulated entities.

Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

voluntary offset market size shrank by 26% (from 102.8 million tonnes)⁵ to pre-2008 levels.

This partly resulted from the inextricable link between environmental markets and their regulatory influences, including California's launch as a compliance-based offset market⁶ – representing an average of 10 MtCO₂e/year that can no longer be tracked as “voluntary.”

The California offset market's transition to compliance demand is ultimately a win for North American offset market participants. In contrast, Australia's failure to permanently maintain an offset-inclusive carbon price resulted in stalled demand for domestic pre-compliance offsets. This represents another approximately 5 MtCO₂e that did not see a repeat in 2013.

If one removes 2012 survey respondents' pre-compliance-driven offset transactions from the equation and strictly compares year-on-year demand for “purely voluntary” offsets, 2013's decline in market

size is less severe – down 13% from the prior year. From this vantage point, the over-the-counter (OTC) market for voluntary offsets – in which the majority of offset suppliers and project developers conduct business – remained larger than in 2008-2010 but still fell short of more recent report years (Figure 4).

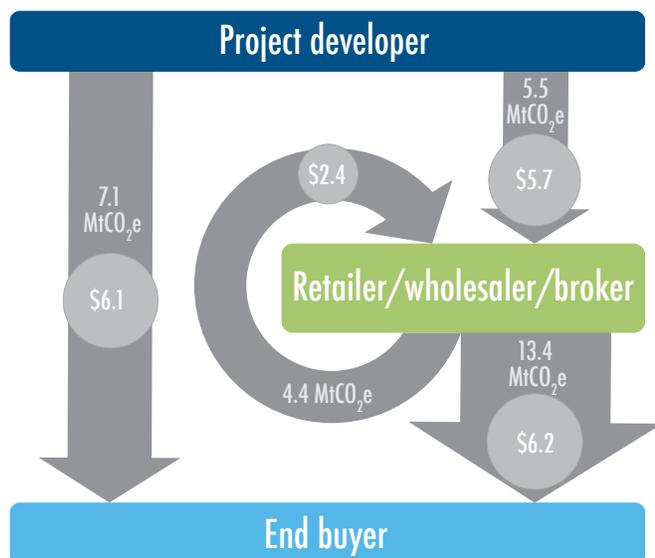
Turning to market value, the global average offset price also fell by 16% to US\$4.9/tCO₂e, from \$5.9/tCO₂e in 2012. Global market value tracked alongside these falling prices in 2013, to total \$379 million. Down 28% from 2012's \$523 million market, last year's value is comparable to levels tracked in 2007 – a year one supplier described as the eve of “climate-relevant” carbon market activity.

Suppliers say the market's lower average prices – and dampened demand overall – are reflective of increasingly competitive pressures among offset suppliers facing depressed compliance offset prices and oversupply which led to “dumping” in some markets; slow economic recovery in the European Union that found many loyal offset buyers

⁵ This number is updated from last year's report to reflect an additional 1.8 MtCO₂e that was transacted in 2012 and reported in 2014.

⁶ These offsets are therefore no longer tracked in this report series unless reported as sold to voluntary buyers.

Figure 5: Transacted Volume and Average Price by Seller and Buyer Types, 2013



Notes: Based on responses representing 32 MtCO₂e in transacted offset volume for which both buyer and seller types were reported.

Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

grappling with truncated budgets for corporate social responsibility (CSR) programs and/or marketing; and continued issuance of large offset volumes from purely voluntary offset projects in the forestry and clean cookstoves project sectors.

Last year's prices nevertheless remained well above the average price of offsets under the UN Clean Development Mechanism (Certified Emissions Reductions, or CERs), where regulated EU-based buyers could obtain offsets for a fraction of a US dollar in 2013. CERs entered the voluntary offset market, too, but their average price was on par with other traditional voluntary programs (between \$4.5 and \$4.6/tCO₂e).

Across all of the years of market activity tracked in this report series, voluntary buyers have funded 844 MtCO₂e

in emissions reductions worth \$4 billion and at an average historical price of \$5.9/tCO₂e.

Project Developers, Brokers Most Affected by Market Slump

Last year, transaction volumes were equitably disbursed among types of market actors – much to the frustration of project developers that, in 2012, reported transacting at least half of all offset volumes. This year's data reveals that the volume of offsets flowing from projects – and as a result, through brokers – saw the steepest absolute decline (down 40% and 58% from 2012, respectively) while the volume supplied by retailers was unchanged (22 MtCO₂e).

Demand for the 22.6 MtCO₂e supplied directly by projects in 2013 was also fairly evenly split between offset retailers seeking supplies to sell on to their clients, and end buyers that decided to forgo retail services and engage directly with project developers. As in 2013, project developers charged end users slightly lower prices than did retailers (Figure 5).

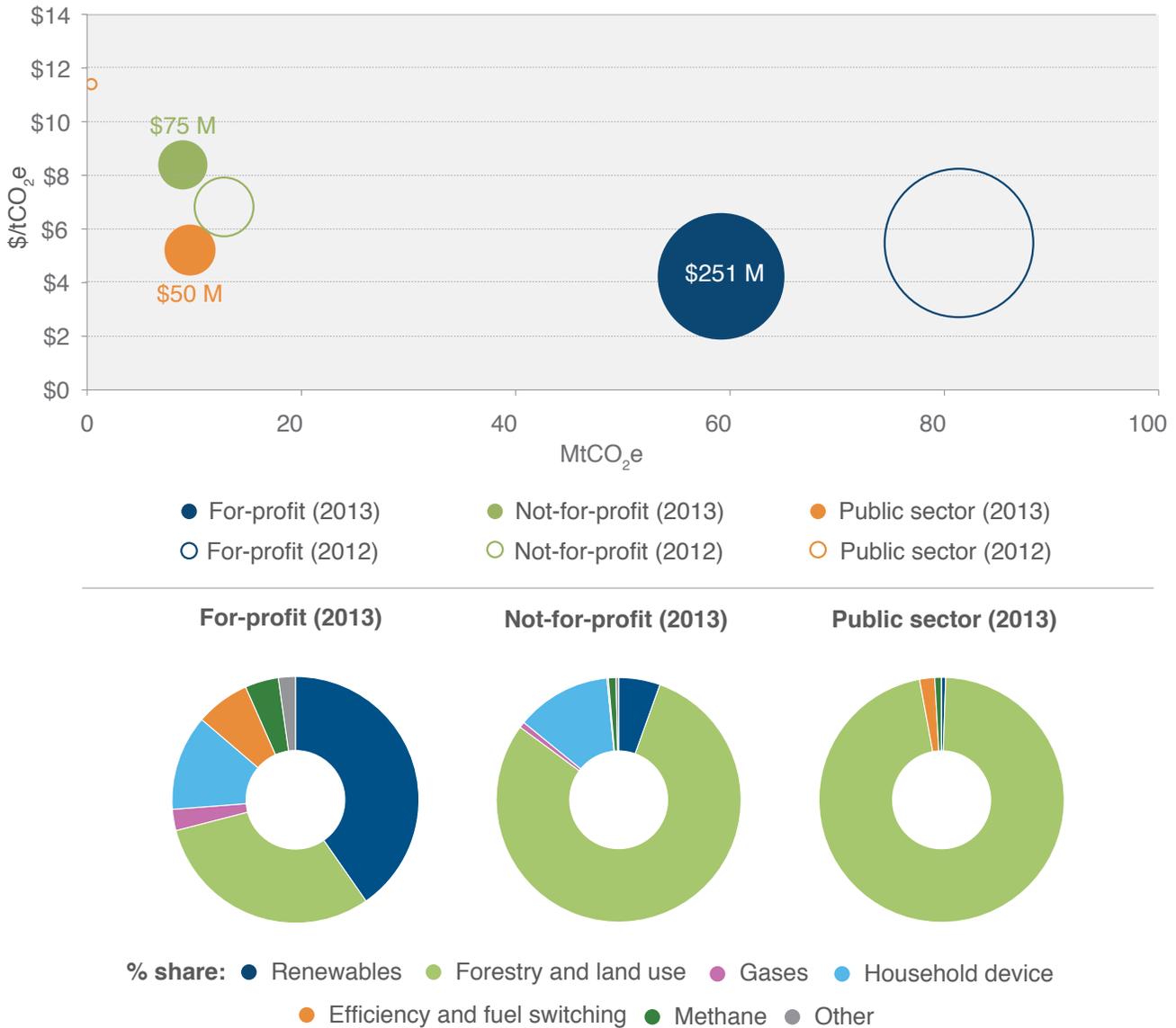
Public Sector Buyers, Suppliers Address Market Gaps

National and sub-national governments and multi-lateral public agencies played an important (and largely new) market role in 2013. As both buyers and suppliers, governments and quasi-government entities supplied 15% of transacted offsets as project developers and bought another 19% of all offset purchased or financed.

This includes a significantly-sized transaction between German development bank KfW (Kreditanstalt für Wiederaufbau) and Brazil's Acre state, which was communicated as multi-year "payments for performance" to support the state's forestry sector through Germany's REDD+ Early Movers Programme (REM). Acre agreed to deliver and retire on KfW's behalf 8 MtCO₂e in emissions reductions between 2013 and 2016. It also committed to reduce and retire an additional tonne for each tonne reduced and retired through the REM programme.⁷

⁷ Read more about the bilateral agreement here: https://www.kfw-entwicklungsbank.de/Internationale-Finanzierung/KfW-Entwicklungsbank/Wer-wir-sind/News/News-Details_178944.html. (Last accessed May 15th, 2014). The emissions reductions resulting from this transaction are not used to "offset" any emissions in the traditional sense, nor will be canceled against any compliance obligation. This report series nonetheless tracks all payments for emissions reductions that are contracted and accounted for on a per-tonne basis, and particularly if they are retired. The REM Programme's transaction therefore meets this survey's methodological requirements for inclusion.

Figure 6: Market Share and Value by Supplier Profit Status, 2012 and 2013



Notes: Based on responses representing 76 MtCO₂e in transacted offset volume.

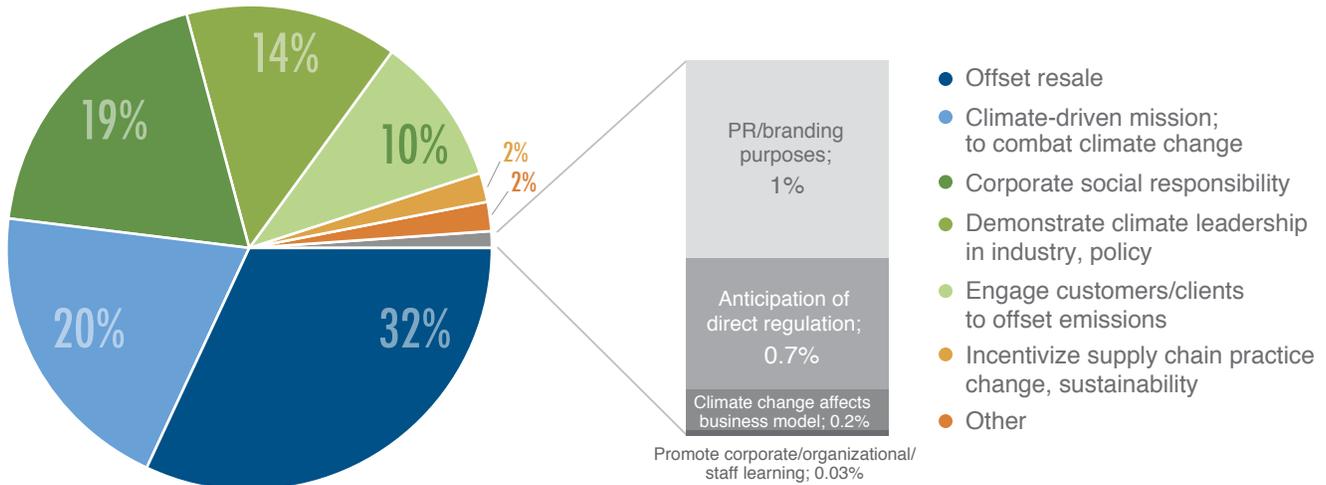
Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

Even excluding this agreement, public sector suppliers and buyers together accounted for 3.4 MtCO₂e in transactional activity in 2013, up from 2 MtCO₂e in the prior year. Public programs represented in this year's data ranged from the Korea and Japan Verified Emissions Reduction programs (K-VER and J-VER); to Italy's regional carbon market; to offset purchases by the UN Environment Programme (UNEP) and UN Office for Project Services (UNOPS) to neutralize previous years' organizational emissions.

Private Buyers' Market Share Falls, but Climate Commitments Deepen

While the private sector remained the largest source of demand, transactional activity attributed to this sector fell by 46% to 35 MtCO₂e. Buyers in this category represented multinational corporations (20.3 MtCO₂e), small- to medium-sized enterprises (9 MtCO₂e), and domestic companies (6.2 MtCO₂e). Developing country-based buyers were most likely to buy from projects in their country and to seek offsets

Figure 7: Market Share by Buyer Motivation, 2013



Notes: Based on responses representing 40 MtCO₂e in transacted offset volume.

Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

from forestry. Brazilian cosmetics company Natura's support to the Paiter Suruí people is one such example.

Energy utilities, finance and insurance providers, the transportation sector, and companies engaged in industrial processes (non-energy) obtained the largest share of volumes among private entities. Suppliers point out that these sectors are notably less consumer-facing and more likely to already be regulated than their counterparts in communications, events, tourism, or retail product markets, for example. This may speak to the fact that companies such as these – with recognizable climate and regulatory exposure – are more likely to obtain offsets alongside other business-as-usual practices. They may also have less low-hanging fruit to choose from when it comes to reducing operational emissions and so must rely on offsets to achieve deeper reductions.

These shifts in buyer representation are reflected in their changing motivations, too, where public relations and branding almost fell off the motivations map in 2013, while the more altruistic motivation “pursuing a climate-driven mission; combatting climate change” shot up to the top of the list – driving 7.2 MtCO₂e in offset purchases, from 2.7 MtCO₂e in 2012. Close behind, buyers pursuing corporate responsibility targets and industry or policy leadership were also prominent.

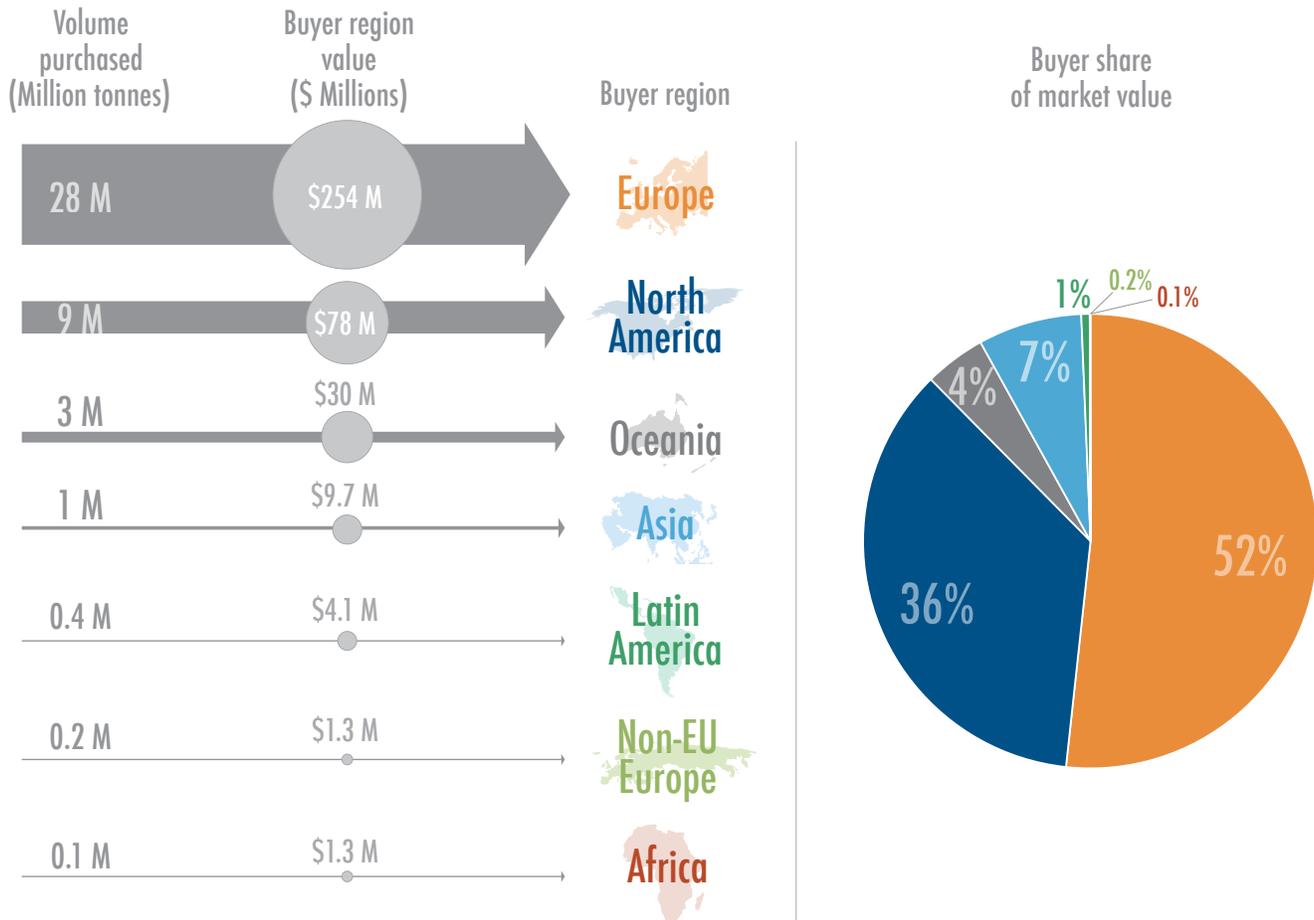
For the first time last year, buyers leveraged over 0.5 MtCO₂e as incentive payments to producers,

purchasers, or communities within their supply chains. This response option was added when companies began reporting their supply chain risks – particularly forest risks – through corporate transparency initiatives like the Carbon Disclosure Project and committing to sustainable sourcing through industry roundtables and under the guidance of organizations such as the Dutch Sustainable Trade Initiative (IDH) and the Consumer Goods Forum. This finding is the first indication in this report series that companies with said risks are indeed paying suppliers or others within their business' sphere of influence to verify and deliver on their carbon performance.

As in previous years, offset resale was the single most prominent motivation. Accounting for the full value of the flow of products through offset retailers in 2013, these actors collectively supported the transaction of 33.3 MtCO₂e or 44% of total market size by volume. As a buyer, they purchased/sourced 11.5 MtCO₂e in 2013, an increase of 3.4 MtCO₂e over 2012.

The European private sector – including a large contingent of offset retailers – remained the most prominent buyer type and region for offset demand, though their purchase volumes fell 36% to 28 MtCO₂e in 2013. Suppliers in the region attribute this finding to collectively poor opinions of the CDM within the business community, which colored their views of voluntary offsetting. Given the region's still-muted economic conditions, they also cited a shift in

Figure 8: Transacted Volume, Value and Share of Market Value by Buyer Region, 2013



Notes: Based on responses representing 43 MtCO₂e in transacted offset volume.

Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

corporate attention to other sustainability measures (including supply chain carbon management) that are perceived to achieve more straightforward economic and environmental efficiencies for their business.

Demand in North America saw a more significant drop than in Europe, down 68%, from 30 MtCO₂e in 2012 to 9 MtCO₂e in 2013 – and even if strictly accounting for purely voluntary demand (down 53% from 20 MtCO₂e). Here, market participants say that with US federal climate legislation in the rear view mirror and no new market on the horizon, companies are continuing to take climate action – but offsets are rarely a part of their strategy. Even so, the region boasted new or continued offsetting commitments from a number of by-now-recognizable corporates

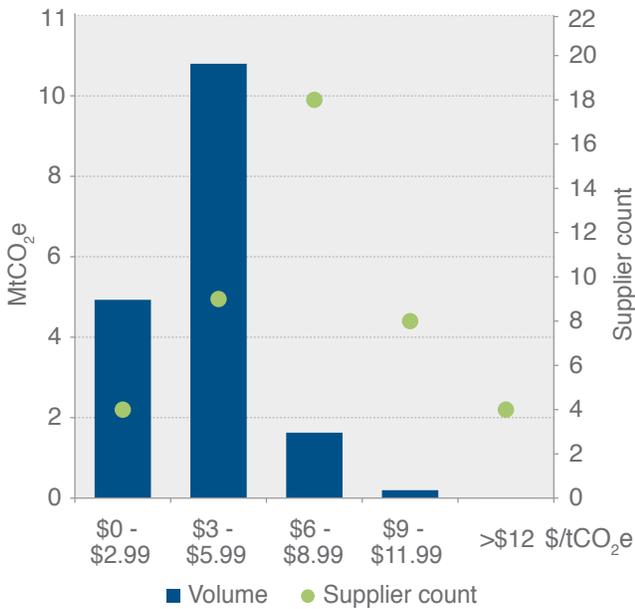
including Microsoft, The Walt Disney Company, eBay, Duke Energy, Interface, and UPS.

Responses to a new question in this year's survey reveal that the largest volume of tonnes sold to new buyers was purchased by Australians (1.3 MtCO₂e). Australia saw 100% growth in its volume of purely demand in 2013, the largest proportion of which reflected the region's historical go-to project categories: renewables and forestry and land use.

Findings Illuminate Importance of Relationships, Identification of New Buyers

Suppliers have existing buyers to thank for continued market activity – current client demand was behind 76% of transacted volumes in 2013. First-time buyers

Figure 9: REDD+ Offset Transacted Volume and Supplier Count by Price Range



Notes: Based on responses representing 22 MtCO₂e in transacted offset volume.

Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014.*

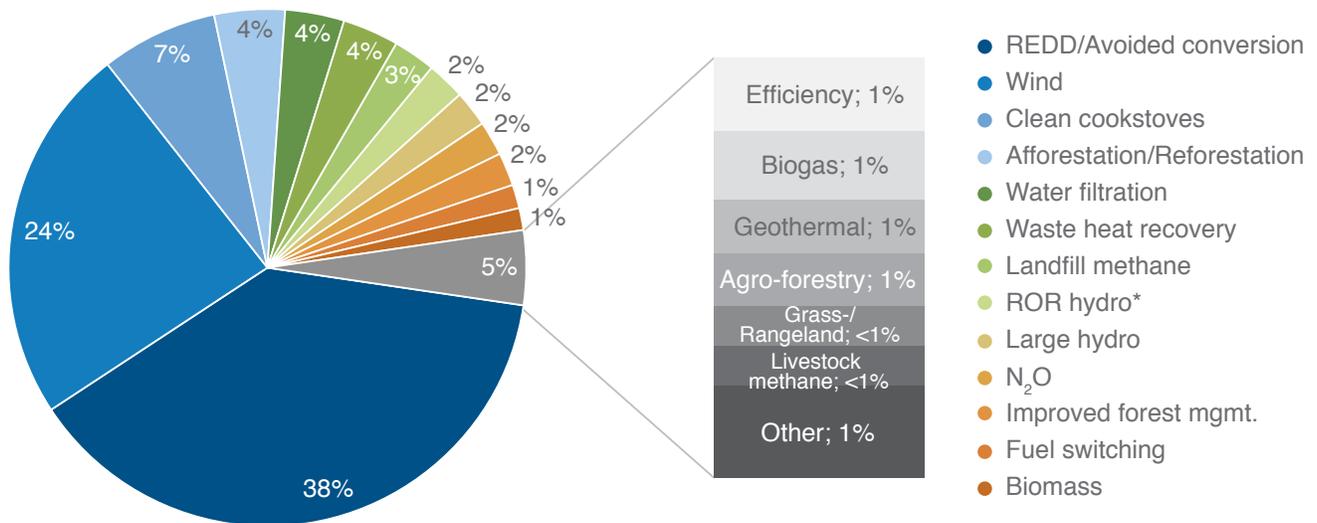
like KfW made up the remaining 24%. Excluding the KfW/Acre state transaction from the analysis paints a more sobering picture for traditional market players, seeing first-time buyers transact a mere 3 MtCO₂e and at an average price of \$3.7/tCO₂e. New buyers also almost exclusively sought inexpensive forestry offsets while renewable energy project offsets remained the bread and butter of existing clients.

Suppliers reported selling 9 MtCO₂e to buyers that were not new to the market in 2013, but had previously bought offsets from another supplier. This includes buyers like offset retailers that source offsets from a variety of developers, as well as traditional corporate clients seeking better prices, portfolio options, or service elsewhere. Findings suggest that this switch may often occur on the basis of price, as experienced buyers that switched to new suppliers in 2013 paid slightly less than those that remained with their long-time partners in carbon offset management (\$5.2/tCO₂e versus \$5.9/tCO₂e).

REDD Uproots Renewables as Top Source of Offset Market Activity

Reeling from 2012-2013's intensifying price competition and cash flow issues, many forest carbon

Figure 10: Market Share by Project Type, 2013 (% Share)



Notes: Based on responses representing 60 MtCO₂e in transacted offset volume. *Run-of-river hydropower.

Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014.*

project developers conceded to buyer demands and dropped their previously above-average prices. Because demand for forestry offsets is significantly sensitive to changes in price,⁸ the voluntary forest carbon markets in turn surpassed 2012's sizable transaction volume⁹ to total 27 MtCO₂e.

In no category was this change more deeply felt than among projects that reduce emissions from deforestation and forest degradation (REDD). Here, transaction volumes more than doubled to 22.6 MtCO₂e, while market value also increased by 35% to \$94 million. Even excluding KfW and Acre state's sizable agreement to performance-based payments for REDD, the project type retains 2013's top spot.

This growth came at a (lower) price, with suppliers reporting an average REDD offset price of \$4.2/tCO₂e (down from \$7.4/tCO₂e) which would have been even less (\$3.5/tCO₂e) had it not been buoyed by Acre's sizable transaction, approximated at \$5/tCO₂e. REDD's price drop was not common to all project developers and suppliers – as seen in Figure 9, less than a handful of REDD offset suppliers sold a full 28% of tonnes at less than \$3/tCO₂e.

Renewable energy projects – long an important project type among voluntary offset buyers due to their availability, relative cost-effectiveness, and straightforward nature – ceded the top spot to the forestry and land-use sector last year, transacting 18.7 MtCO₂e in 2013 compared to 26 MtCO₂e in 2012. Though prices for wind projects in particular continued to come down (by 36% to \$2.1/tCO₂e), project types that voluntary buyers deemed to be more “co-benefits-oriented” also became more affordable – and thus competitive – last year.

The next most popular project type was “household device distribution,” including the sale or giveaway of cleaner, more efficient, and less harmful cookstoves or water filtration devices. Some offset suppliers in this category held out for high prices at the cost of less demand, while others sought contracts with government agencies in countries like Sweden that were offering more favorable, longer-term contract terms. While the governments' offer of favorable contract terms and pricing were voluntary, the resulting offsets will ultimately be used for compliance

with the European Union Emissions Trading System, so are not included in this report analysis.

Proprietary Standards Re-Engage while Independent Standards Hold on to Lead

The Verified Carbon Standard (VCS) held on to its top spot among third-party standards guiding the development and monitoring of carbon projects; 28.9 MtCO₂e of 2013's total volume was transacted from projects at some stage of development under VCS. More than a third of VCS tonnes (9.6 MtCO₂e) claimed or aimed to additionally deliver social or environmental benefits under the Climate, Community and Biodiversity Standards (CCB Standards) for forest carbon projects or according to the SOCIAL CARBON standard (1.3 MtCO₂e) as buyers continued to show interest in offsets with certified benefits beyond carbon.

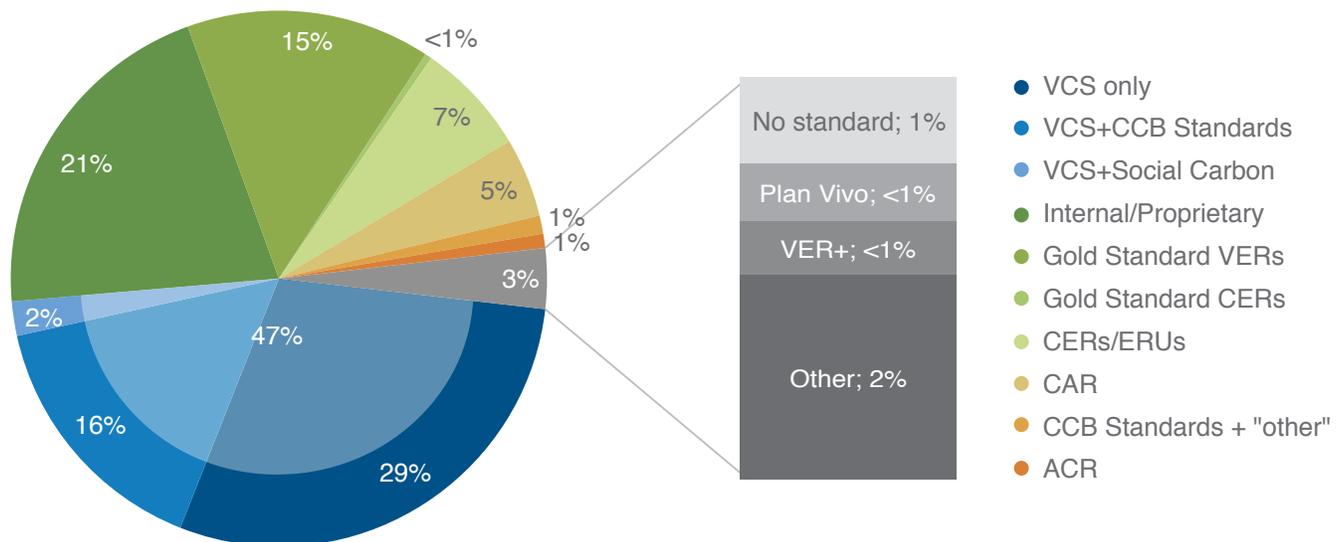
Total volume of transacted tonnes that achieved or are pursuing VCS certification nevertheless fell sharply from 42.9 MtCO₂e in 2012, as proprietary standards and internally developed project guidance staged a comeback. While previous years saw consolidation around a few key independent, peer-reviewed standards, more than one fifth of transacted offsets reported following an internal/proprietary standard in 2013. This includes activities associated with emerging subnational (or “jurisdictional”) programs for which consensus around program development, measuring, monitoring, and safeguards approaches is only recently emerging from market shapers like the World Bank's Forest Carbon Partnership Facility – which will invest in and support activities exclusively at the jurisdictional scale. In the meantime, the forest carbon offset market has seemingly returned to an experimental phase, seeing standards like the Acre Carbon Standard, the Natural Forest Standard, and Global Conservation Standard (among others!) bubbling to the surface. VCS released updates to its jurisdictional REDD requirements in October 2013, however, and has a Memorandum of Understanding with Acre state to pilot a jurisdictional methodology.

Projects adhering to The Gold Standard managed to maintain their market hold even in the context of

⁸ Average elasticity coefficient of 4.5 across all report years.

⁹ The volume of forestry offsets tracked in this report will continue to grow as Ecosystem Marketplace engages in ongoing data collection to inform its *State of the Forest Carbon Markets* report (expected fall 2014). Similarly, forestry offset transaction details presented in this report are sourced from the *State of the Forest Carbon Markets* report (fall 2013), the most recently updated source of market data.

Figure 11: Market Share for Popular Independent Third-Party Standards and Certifications (% Share)



Notes: Based on responses representing 60 MtCO₂e in transacted offset volume.

Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

a tough market – seeing only a slight 3% drop in 2013 volumes across both voluntary and certified emissions reductions (VERs and CERs). Despite a more notable 9% drop in reported prices, The Gold Standard's average price remained significantly higher than the market overall (\$8.5/tCO₂e versus \$4.9/tCO₂e). Throughout 2013, the program worked to incorporate into its scope its 2012-2013 acquisition of CarbonFix, alongside partnerships with Fairtrade and the Forest Stewardship Council, the aim being to introduce a forestry and land-use element to its stakeholders. The Gold Standard also grew its urban presence with a new Cities Programme aimed at incentivizing energy efficiency and waste management in developing cities through performance-based payments that would include — but not exclusively prioritize — emissions reductions.

Both the Climate Action Reserve (CAR) and the American Carbon Registry (ACR) turned their attention to California's compliance market in 2013, newly functioning as approved Offset Project Registries. Regulators also adapted several CAR protocols for use as compliance offset protocols (with only slight modification) and deemed a few existing CAR project protocols as eligible for receiving early-action credit. While for the first time in several years ACR offset suppliers reported a 27% increase in market activity, many CAR project developers and suppliers trained

their sights on California's compliance offset market and thus lost some footing in the purely voluntary offset market. CAR and ACR continued to develop new offset protocols such as rice cultivation and wetlands restoration, using the voluntary market as a proving ground in hopes that these methodologies will also eventually be adapted for California compliance.

As the first commitment period of the Kyoto Protocol came to a close at the end of 2012, uncertainty about the role of the CDM in a future climate agreement ran high – seeing some CDM project developers turn to voluntary buyers to offload CERs or Emissions Reduction Units (ERUs, from projects based in developed countries). Together, CERs and ERUs held 7% of overall market share, with an additional 0.4% of transacted CERs also certified to The Gold Standard.

Asia-Based Projects Retain Top Supplier Status; Brazil's Success Grows on Trees

The CDM's marked presence in Asia was again apparent in 2013, when 21 MtCO₂e transacted were associated with Asian projects. Around 70% of these tonnes were generated by renewable energy projects and transacted at below-average prices (\$1.7/tCO₂e). Asian clean energy offsets remained a staple in most retailer portfolios.

Projects in India and China were the most common Asian offset sources, primarily due to their abundant stocks of inexpensive renewable energy offsets. Elsewhere in the region, buyers and their suppliers paid increasing attention to Asia's forestry and energy efficiency projects – driving market growth in Malaysia and Indonesia.

With seven Chinese pilot emissions trading schemes now active, interest in Chinese offset demand is high, but regulatory opacity regarding offset eligibility has led China's suppliers and buyers to take a wait-and-see approach. Meanwhile, Japan consolidated its voluntary standards – the J-VER and J-CDM – into the new J-Credit Scheme, while Korea continued to iron out the details of its proposed 2015 emissions trading scheme. Thailand and Indonesia are exploring similar voluntary emissions trading schemes for late 2014 or 2015.

Meanwhile, Latin America gave Asia's traditional offset supply countries a run for their volume, seeing 19 MtCO₂e transacted from the region's projects. Through its 8 MtCO₂e transaction with KfW, Brazil's Acre state – along with sizable transactions from a few REDD+ projects in other locales – pushed Brazil over the top as the market's most popular project location in 2013. Peru, Mexico, and Argentina also experienced similar, though smaller, gains in volume. Regional average prices fell 39% to an average \$5.0/tCO₂e, reflecting lower prices for forest carbon offsets. Though Latin America's project developers do focus on forestry, renewable energy, household device distribution, and energy efficiency projects made modest gains.

Africa-based projects transacted a record 11 MtCO₂e in 2013 as Kenya retained its just-podium-shy place as the world's fourth largest offset supplier, generating 4.8 MtCO₂e in transaction volume. The Democratic Republic of Congo, one of four countries to be accepted into the World Bank's Carbon Fund REDD pipeline in 2014, also made a strong showing on the voluntary market last year, with DRC-based projects transacting 1.4 MtCO₂e. Projects in Ghana, South Africa, Tanzania, and Uganda, among other countries, also contributed to the continent's growing market share, which is driven by buyer interest in projects with strong health or biodiversity benefits such as clean cookstove distribution, water purification, and REDD.

The US state of California launched its cap-and-trade program in January 2013. As such, the transaction of millions of offsets from forestry, livestock methane

management, and domestic ozone-depleting substances (ODS) projects in North America – that were previously tracked as “voluntary” – migrated into the compliance market last year. Absent these transaction volumes, the region's remaining purely voluntary projects transacted 5.1 MtCO₂e compared to 23 MtCO₂e reported in 2012.

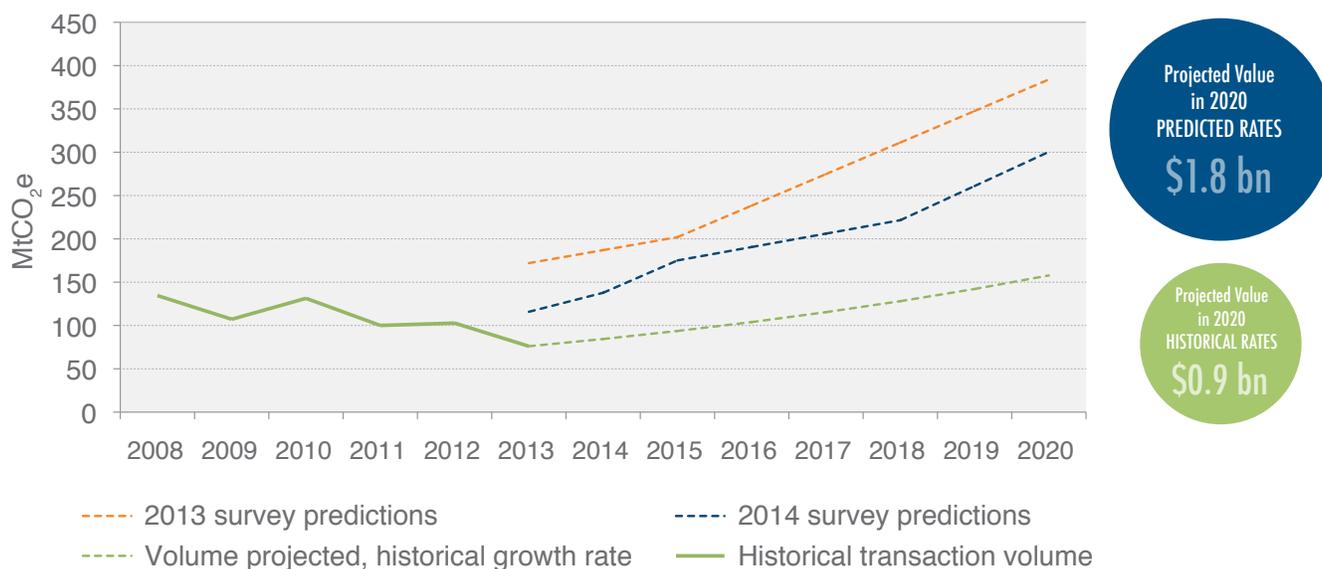
The majority of Europe's 2013 transactions were from wind, hydro, and landfill methane projects implemented in Turkey (3MtCO₂e). Because European Union (EU) members' Kyoto Protocol commitments means that the majority of their emissions are already “capped” via the EU Emissions Trading Scheme, EU-based projects supplied the voluntary carbon market with only 0.5 MtCO₂e in 2013. However, project developers in the United Kingdom were active in the 2013 market, issuing more than 400,000 Pending Issuance Units representing forward sales under the UK's Woodland Carbon Code. The Italians also developed afforestation/reforestation offsets for future sale to public-sector voluntary initiatives, as well as an Italian Forest Carbon Code to standardize voluntary methodologies.

Projects in Oceania suffered a setback in 2013, as Australia's new government vowed to repeal the country's emissions trading scheme that took effect in 2012. Australia's offset market will likely be replaced with an “Emissions Reduction Fund,” which would serve as a reverse auction for the government to buy from competing sellers. As the details of future demand are being decided, uncertainty looms over Australian project developers and, accordingly, volume fell sharply by 94%. The Carbon Farming Initiative may have also created a bottleneck for supply, as the process for early methodology approval took longer than expected, with the first approvals not coming through until 2013.

Markets Past, Present, and Future: Waiting Out Prices, Scaling Back Supply

Though offset suppliers speculate that the voluntary offset market is seeing more exit than entry, many actors from the private, public, and non-profit sectors remain committed to performance-based payments for emissions reductions – even if the script has changed. The market remains illiquid and features a range of project types, regional trends, and buyer motivations that share the stage with offsets from differentiated projects sold at a range of price points.

Figure 12: Market Projections, Historical Data, and Supplier Predictions



Notes: Based on responses from 156 offset suppliers active in 2013.

Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

Survey respondents predicted that the voluntary offset market will grow to 175 MtCO₂e in 2015 and 300 MtCO₂e in 2020 – a more tentative growth rate than they projected in last year's survey – though they overestimated the size of last year's market by 52%. They also project that 2014's market will transact 138 MtCO₂e, which would require an 81% growth rate from 2013's market size, valued at an additional \$302 million.

Based on the voluntary market's historical average price of \$5.9/tCO₂e, suppliers' predictions place market value at \$1.8 billion in 2020. This is roughly double the \$0.9 billion that would be required to sustain the market's average historical growth rate (11%) over the same period.

Survey respondents reported 31.8 MtCO₂e in their project portfolios that remained unsold at the end of 2013. The majority of those tonnes (12.6 MtCO₂e or 43%) were reported by 36 suppliers that tried to but simply did not find a buyer by year's end. Another 23% of unsold volume (7.1 MtCO₂e) was associated with three suppliers that plan to exit the market in 2014 due to insufficient demand. At least 18 offset suppliers reported that they did not transact 6 MtCO₂e in 2013 because they were holding out for more favorable offset prices. Ten suppliers were still in negotiations with buyers at year's end – thus their

3.6 MtCO₂e that remained unsold in 2013 will likely be reported as a transaction in next year's survey.

In terms of projects' pipeline – representing the emissions reductions that could be brought to market in the next five years if demand warranted project development – survey respondents reported a potential 277 MtCO₂e through 2018. The size of this pipeline is significantly reduced from what was reported in 2013, when project developers targeted bringing up to 1,440 MtCO₂e offsets to market in the next five years under more favorable market conditions.

Market Outlook: Staging a Second Act?

Important developments in late 2013 and the first half of 2014 are creating the conditions for voluntary carbon market projects and standards to play a new or expanding role in emerging compliance markets. A policy paper released in 2014 by South Africa's Treasury Department and Department of Environmental Affairs pitches a plan to accept offsets verified to voluntary standards VCS, GS, and CCB alongside CDM in the country's upcoming carbon tax, 30 MtCO₂e of which could potentially be generated from emissions reductions projects located in South Africa (as required by the policy), according to an analysis by Camco Clean Energy.

As the US Environmental Protection Agency moves to regulate emissions from power plants, northeast states involved in the Regional Greenhouse Gas Initiative are pushing for a market-based mechanism that will allow for allowance trading across state lines – and a potentially stronger market signal for the program's existing offset provisions.

Meanwhile, methodologies auditioned in the voluntary carbon market have already made their way into California's compliance program, which continues to review and adapt new protocols that are undergoing "groundtruthing" with support from voluntary offset buyers. California's carbon market is also the most immediate hope for compliance demand for REDD offsets, though both this market and any international market for REDD+ stemming from a UN framework are still several more years in the making.

In general, future demand for emissions reductions activities could come from bottom-up compliance carbon markets emerging around the world. Kazakhstan launched its emissions trading system at the beginning of 2013, and South Korea is planning its start date for 2015.

China also opened four of its seven planned subnational carbon markets in 2013, offering a potential lifeline to CDM project developers to re-register their offsets as China Certified Emission Reductions, which could fetch higher prices in the domestic markets. China's Ministry of Finance recently announced plans to move forward with a national carbon market within three years.

On the voluntary side, a sustained interest in co-benefits sets the stage for some out-of-the-box carbon products in coming years as performance-based payments for emissions reductions are increasingly

used as a quantifiable proxy for other outcomes such as watershed protection, biodiversity gains, reduced health risks, and climate resilience. A recent Gold Standard study found that the co-benefits of 109 of its certified projects added an additional \$686 million in annual value tied to environmental, economic and social results beyond carbon.

Research by CDP reveals that the private sector is increasingly concerned about climate change risks such as megastorms, precipitation shifts, and drought, which directly affect the operation of utilities, food and beverage companies, financial firms, and other private-sector players. Whether or not increasing recognition of climate risks leads to a renewed interest in offsetting remains to be seen, but a CDP report released in late 2013 revealed that at least 29 companies operating in the US use an internal price on carbon ranging from \$6/tCO₂e to \$60/tCO₂e to guide investment decisions. In some cases, this "tax" levied on business divisions creates a pot of money that is applied to emissions reductions activities such as energy efficiency retrofits and teleconferencing. In others, it is also leveraged to purchase offsets that deepen the achievement of any in-house emissions reductions.

Presently and in coming years, the landscape of carbon markets is and will be more fragmented than most market participants imagined even five years ago. Yet, this fragmentation has made space for some unexpected climate actors to debut their innovations. As the costs of climate change mitigation and adaptation continue to rise, finding – and marketing – efficiencies that result in both emissions reductions and sustainable development is imperative. This, perhaps, is the key role of the voluntary offset markets – to finance innovation, shared responsibility and rapid solutions that might prevent the earth's climate from going completely off-script.

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Definitions and Glossary

Additionality Requirement that emissions reductions claimed as offsets must go above and beyond emissions reductions that could have been achieved under a business-as-usual scenario. Methods of gauging additionality include regulatory, financial, barriers, and common practice tests. These methods can be applied at the project level (project-based approach) or across a project category (standardized approach).

Baseline The estimate of greenhouse gas emissions, population, gross domestic product, common practice, and other factors that describe the “business-as-usual” scenario that would have occurred without implementation of the carbon project activity.

Carbon Offset In this report series, a carbon offset is defined as an instrument representing the reduction, avoidance, or sequestration of one metric tonne of carbon dioxide or greenhouse gas equivalent.

Compliance Carbon Markets Marketplaces through which regulated entities obtain and surrender emissions permits (allowances) or offsets in order to meet regulatory targets. In the case of cap-and-trade programs, participants – often including both emitters and financial intermediaries – are allowed to trade allowances in order to meet regulatory requirements or to make a profit from unused allowances.

Co-Benefits Additional environmental, social, or other benefits arising from a carbon project that are quantified based on metrics or indicators defined by the project developer or by a certification standard. Some registries and standards enable co-benefits certification to be “tagged” onto issued carbon offsets, if quantification and verification of co-benefits are not already embedded in a carbon project standard.

Emissions Scopes Scope 1 emissions encompass all direct greenhouse gas emissions. Scope 2 emissions cover indirect emissions from consumption of purchased electricity, heat, or steam. Scope 3 emissions represent indirect emissions from outstanding sources left out of Scope 2, including extraction and production of purchased materials and fuels, electricity-related activities, transport activities in vehicles not owned/controlled by the reporting entity, outsourced activities, and waste disposal.

Issuance / Issued Offsets Once a carbon offset project has been validated, verified, and undergone other required processes, carbon offsets can be issued to the project owner with a unique identifier. Issued offsets may be tracked, transferred, and retired by a designated registry.

Primary and Secondary Markets The primary market for carbon offsets is defined as the initial transaction of offsets from the project developer to the first buyer in line – this can be an offset retailer or wholesaler (i.e., the “secondary market”) or a buyer of offsets for “end use” (i.e., end user or end buyer) in the voluntary or compliance carbon offset markets. Secondary market actors typically resell offsets to make a profit.

Registry A registry issues, holds, and transfers carbon offsets, which are given unique serial numbers to track them throughout their lifetime, and can also retire offsets. In compliance markets, each system has its own

ACR	American Carbon Registry
A/R	Afforestation/Reforestation
ARB	Air Resources Board
CAR	Climate Action Reserve
CCB	Climate, Community and Biodiversity
CCBA	Climate, Community and Biodiversity Association
CCX	Chicago Climate Exchange
CDM	Clean Development Mechanism
CCER	China Certified Emissions Reduction
CER	Certified Emissions Reduction
CFI	Carbon Farming Initiative
CO ₂	Carbon Dioxide
CSR	Corporate Social Responsibility
DRC	Democratic Republic of Congo
EPA	Environmental Protection Agency
ERU	Emissions Reduction Unit
ETS	Emissions Trading System
EU	European Union
FCPF	Forest Carbon Partnership Facility
FSC	Forest Stewardship Council
GHG	Greenhouse Gas
GS	The Gold Standard
IDH	Dutch Sustainable Trade Initiative
IFM	Improved Forest Management
JNR	Jurisdictional Nested REDD
J-CDM	Japan Clean Development Mechanism
J-VER	Japan Verified Emissions Reduction program
KfW	Kreditanstalt für Wiederaufbau
K-VER	Korea Verified Emissions Reduction program
MtCO ₂ e	Million Tonnes of Carbon Dioxide Equivalent
N ₂ O	Nitrous Oxide

designated registry. In the voluntary market, there are independent registries available.

Retirement The point at which a carbon offset is permanently set aside by its owner in a designated registry – effectively taking the carbon offset’s unique serial number out of circulation. Retiring offsets through a registry ensures that they cannot be re-sold – which is of particular importance if the buyer’s intent is to claim the offsets’ emissions reductions against a carbon reduction or neutrality target.

Suppressed Demand A situation where access to energy services is insufficient due to poverty or lack of access to modern energy infrastructure to meet stakeholders’ needs (i.e., their demand for energy services is “suppressed” by their circumstances). In these instances, the project baseline may include a scenario where users’ future emissions are projected to rise above current levels as development provides access to more carbon-intensive sources of energy. Typically based on survey research, the project assumes a higher volume of emissions from the project area in the future and thus receives a larger volume of offsets for avoiding emissions by enabling project stakeholders to “leapfrog” to a clean energy technology.

Standard A set of project design, monitoring, and reporting criteria to which carbon offsetting activities and/or projects’ environmental, social, and other co-benefits can be certified or verified. In the voluntary markets, a number of competing standards have emerged with the intent to increase credibility in the marketplace. More recently, national and sub-national regulated markets have also designed standards specific to regional needs, for voluntary or regulatory use.

Tagged Offsets / “Tagging” When an offset is verified as delivering carbon benefits via a carbon accounting standard – and then also verified to deliver co-benefits – the co-benefits certification is formally layered onto the offset in a registry system.

Transaction(s) We consider “transactions” to occur at the point that offsets are contracted or suppliers otherwise agree to deliver offsets immediately or in the future.

Validation The approval of carbon offset projects in their planning stages, when projects must submit for approval information on project design, including information on baseline scenarios, monitoring schemes and methodologies for calculating emissions reductions.

Verification The process of verifying carbon offsets generated by a project to a particular standard, which quantifies the amount of actual emissions reductions to guarantee that this amount aligns with the number of offsets to be issued to the project. A project’s stated environmental, social, and other co-benefits may also be verified.

Vintage The year in which emissions reductions occur. The vintage of the offsets may not necessarily match the year in which the offsets are transacted – and the vintage year may be in the future.

Voluntary Carbon Market The voluntary carbon marketplace encompasses all transactions of carbon offsets that are not purchased with the intention to surrender into an active regulated carbon market. It does include offsets that are purchased with the intent to re-sell or retire to meet carbon neutral or other environmental claims.

NGO	Non-Governmental Organization
NDRC	National Development and Reform Commission
ODS	Ozone-Depleting Substances
OPR	Offset Project Registry
OTC	Over-the-Counter
PCF	Peru Carbon Fund
PDD	Project Design Document
PFSI	Permanent Forest Sink Initiative
PIN	Project Idea Note
PoA	Programme of Activities
POD	Pay on Delivery
REC	Renewable Energy Credit
REDD	Reduced Emissions from Deforestation and forest Degradation
REDD+	Reduced Emissions from Deforestation and forest Degradation with social and sustainable benefits
REM	REDD Early Movers Programme
RGGI	Regional Greenhouse Gas Initiative
ROR	Run-of-River
ROW	REDD Offsets Working Group
tCO ₂ e	Tonne of Carbon Dioxide Equivalent
UCC	Costa Rican Compensation Unit
UK	United Kingdom
UN	United Nations
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNOPS	United Nations Office for Project Services
US	United States
VCS	Verified Carbon Standard
VCU	Verified Carbon Unit
VER	Verified Emissions Reduction
WCC	Woodland Carbon Code
WCI	Western Climate Initiative
WCU	Woodland Carbon Unit

Introduction

If all the world's a stage, then the voluntary carbon market is certainly a lively one, with diverse actors making entrances and exits and many scenes playing out simultaneously.

Last year this stage was increasingly a shared one as governments began to take on leading roles as buyers, avoided deforestation offsets stole the spotlight from renewable energy as the most sought-after project type, and California's compliance market went live, taking with it lessons from the voluntary market.

Amid these transitions, market actors have sometimes had to go off-script, improvising new relationships in the context of challenging political and economic circumstances. Notably, in the absence of any international signal on carbon pricing, private sector actors continue to voluntarily offset emissions as part of often comprehensive carbon management strategies, with some corporations even implementing their own internal carbon price.

However, the stagnating voluntary demand and dropping offset prices documented in this year's report remind us that the millions of tonnes of potential emissions reductions will not be achieved without increased ambition. That ambition is beginning to materialize from the understudies of the carbon market – governments such as China and South Africa that will audition market-based national carbon policies in the coming months. As these bottom-up markets evolve, voluntary actors may increasingly find themselves taking on new roles in the context of carbon regulation.

We could not have imagined all of the twists and turns in the plotline when we began tracking the voluntary carbon market eight years ago, but our basic goal – facilitating transparency and understanding in a market that otherwise plays out behind a curtain – has remained intact.

This annual report requires outreach to hundreds of organizations that willingly take the time to complete our surveys and, for some, participate in detailed interviews. The outcome is this analysis, which we hope, as the only report of its kind, continues to provide vital perspectives on voluntary offset supply, prices, demand, market infrastructure, and places and people engaged in voluntary carbon finance.

Despite tremendous efforts to contact and collect data from as many suppliers as possible, we are acutely aware of the limitations of survey-based analysis. We caution readers to understand our reporting methodology and to consider reported numbers as conservative.

We hope this report will continue to inspire suppliers to share data and we thank those who contributed data for fostering a more transparent and effective marketplace.

Throughout 2015, Ecosystem Marketplace will track trends and questions first illuminated in this report. If you have questions about content or supporting the production of this type of analysis, please contact us at: info@ecosystemmarketplace.com.



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Methodology: Frequently Asked Questions

How Does this Report Define “Voluntary” Offsetting?

In this report, the term “voluntary carbon markets” refers to all purchases of carbon offsets not driven by an existing regulatory compliance obligation. This includes transactions of offsets created specifically for voluntary buyers (“Verified Emission Reductions” – “VERs”), as well as regulatory market offsets or allowances that buyers voluntarily purchase to offset their emissions. It also includes preemptive transactions of offsets to prepare for future compliance obligations (“pre-compliance”).

How Does this Report Define a Transaction?

We consider “transactions” to occur at the point that offsets are contracted; or suppliers otherwise agree to deliver offsets immediately or in the future; or when suppliers agree to retire an offset on someone’s behalf based on a donation model. Payment and delivery of offsets can occur simultaneously (“spot” transaction); payment can occur immediately (“pre-pay”) or upon delivery (“pay on delivery”) of offsets that will be generated from future emissions reductions; contracts can define a specific volume of offsets to deliver (“firm” or “fixed” delivery), or specify that delivery and payment are based on the volume of offsets that are actually generated by the project in the future (“unit-contingent”).

Does this Report Track Environmental Impact?

Our analysis examines the volume of carbon offsets transacted in order to chart the size of the global marketplace in terms of carbon offsetting and future project investment. We do not track the individual “lives” of offsets as they pass through the value chain. For example, if a project developer sold an offset to an offset retailer and then the retailer sold the same offset to a final buyer, we count each transaction separately in order to derive the volume and value of transactions in the overall market. This methodology is consistent with most other marketplace analyses, such as the World Bank’s annual reports on carbon pricing mechanisms.

We do collect data on the volume of offsets retired. This volume, along with origination numbers, represents

the market’s ultimate environmental impact – retired offsets can no longer be resold and so represent the amount of carbon emissions that were confirmed as being offset in each year.

Where Does Ecosystem Marketplace’s Market Data Come From?

Information presented is based on data collected from offset project developers, wholesalers, brokers and retailers, as well as carbon offset accounting registries and exchanges that track and facilitate the transfer of offsets between owners.

The bulk of data was collected via an online survey designed for organizations supplying credits into the “over-the-counter” (OTC) voluntary carbon market. The survey was available between February 14 and April 30, 2014. It was sent to approximately 1,200 organizations identified as possible suppliers and distributed through the Ecosystem Marketplace news briefs and Climate-L and Forest-L list serves. In the same survey, developers of forest carbon and clean cookstove offset projects were additionally surveyed for both this report and other research products, including the State of the Forest Carbon Markets 2014 report, which require a more extensive project-based (vs. transaction-based) survey. In 2013-2014, Ecosystem Marketplace partnered with the Global Alliance for Clean Cookstoves to disseminate the clean cookstove distribution project survey.

We complemented the survey with data and insights provided by major brokerage firms, as well as registries and exchanges, including: APX, Inc., Australia’s Clean Energy Regulator Registry of Offsets Projects, BlueRegistry, Canadian Standards Association GHG CleanProjects™ Registry, Japan Verified Emission Reduction (J-VER) Registry, Korea GHG Reduction Registry Center, Markit Environmental Registry, Carbon Trade Exchange (CTX), the Chicago Climate Exchange Offsets Registry Program, Climex, and Santiago Climate Exchange (SCX).

To minimize the occurrence of “double-counting” volumes reported by offset suppliers and brokers, we asked respondents to specify the volume of credits transacted through a broker or exchange. When we

identified an overlap, the transaction was counted only once.

How Do You Protect the Confidentiality of Survey Responses?

This report presents only aggregate data. All supplier-specific information is treated as confidential. Any supplier-specific transaction data mentioned in the text was already public information or approved by the supplier. Additionally, we do not identify prices or volumes from any country, project type, standard, or vintage for which we had fewer than three data points to protect the confidentiality of the supplier's transaction information. We do not share supplier information with third parties without prior permission from the survey respondent.

What Was this Report's Survey Response Rate in 2014 (Examining the 2013 Offset Marketplace)?

Each year, our goal is to identify and collect information from as many active offset suppliers as possible. It is critical to note that because of the fragmented nature of the market and confidentiality issues surrounding transaction data, it is impossible to capture all deals.

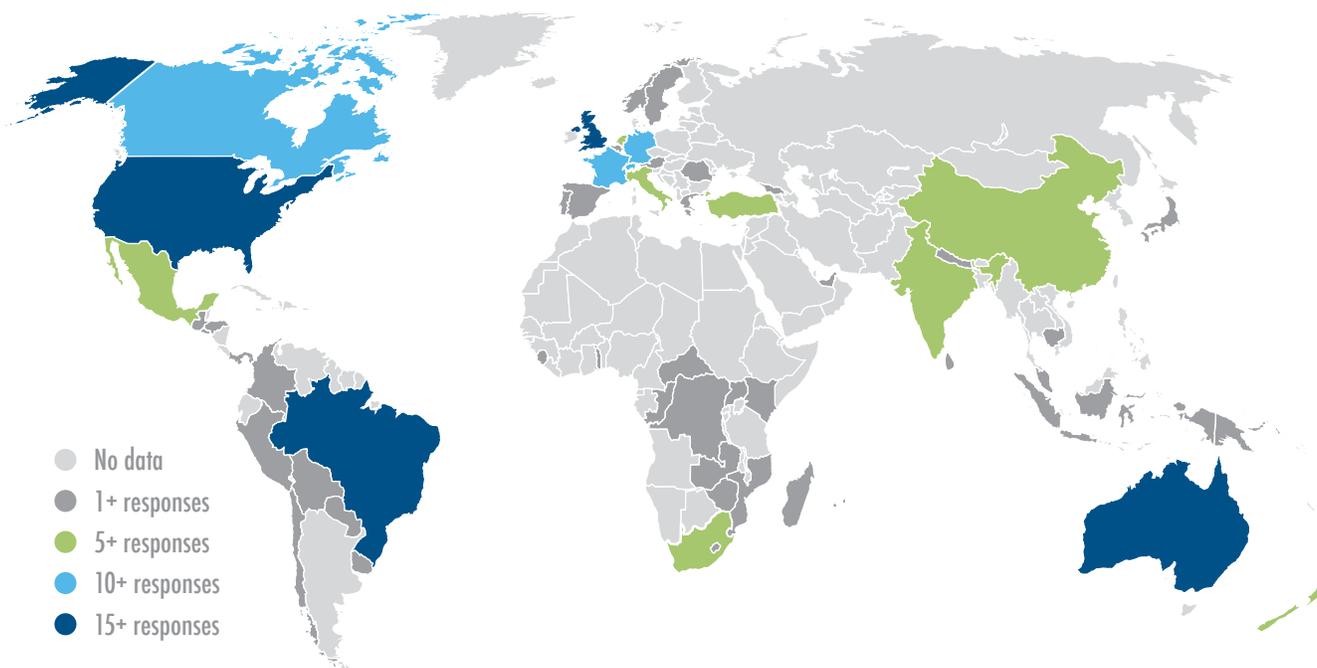
This year, we received survey information from 282 organizations, 221 of which supplied carbon offsets to voluntary buyers in or before 2013. We identified or communicated with another 164 suppliers from our list that did not transact offsets in 2013, were no longer selling voluntary carbon offsets or were no longer in business. Based on the numbers described above as well as contact with brokers and industry associations, we estimate that well over two-thirds of active VER suppliers provided some level of data.

What Was the Regional Survey Response Distribution in 2012?

The largest proportion of survey respondents was based in the US (24% of all respondents). After the US, suppliers based in the United Kingdom were again the second-largest proportion of respondents, followed by Australia and Brazil.

We received the largest number of responses from European suppliers (64) – in line with the large volume of offsets supplied by retailers in the region (38 MtCO₂e). The response rate from North American offset suppliers was close behind (59), behind 16.4

Figure 13: Response Rate Distribution by Offset Supplier Country Location, 2013



Notes: This chart describes our 2013-2014 survey response rate, totaling 282 responses.

Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

MtCO₂e of transacted offsets. In aggregate, 71 offset suppliers responded to the survey from emerging markets in developing countries, where organizations headquartered in Latin America (39), Asia (20), and Africa (12) made up one third of all survey respondents, supplied 30% of all transacted volume (24.5 MtCO₂e) and 25% of market value (\$116.8 million). Figure 13 illustrates regional response rate distribution by country.

While the locations of survey respondents somewhat aligns with the locations of both offset project developers and resellers (wholesalers, brokers, retailers), we believe there are dozens of project developers generating and selling to voluntary buyers across the globe that we were unable to survey. Many of these projects are represented by reseller responses in the survey and hence Figure 13 does not fully represent the distribution of project locations. For this information, see Section 2.3.

How Do You Calculate Market Share and Aggregate Volumes?

All of the calculations in this report are weighted by respondents' transaction volumes to determine the significance of their response. Responses from suppliers who did not disclose 2013 transaction volumes were not included in many figures, as it could not be ascertained how significant their answers were to the offset market. Market share is thus calculated based only on the transaction volume associated with each question. We do not extrapolate market share findings to all volumes reported in our survey, as the marketplace is too differentiated to make such assumptions. Notes at the bottom of most figures report the transaction volume associated with the figure.

How Does This Report Present Prices and Market Value?

All offset prices reported in this series are volume-weighted to determine their significance. We prioritize pricing that was reported at the transaction level as more granular and robust than organization-wide pricing. For organizations that disclosed volume data but not price data, we used the market-wide average price as a proxy in our monetary valuation of the overall market and any variables for which we present market value.

All financial figures presented are reported in US Dollars unless otherwise noted. The numbers presented throughout this survey are measured in metric tonnes of carbon dioxide equivalent (tCO₂e) or million metric tonnes of carbon dioxide equivalent (MtCO₂e).

Do Ecosystem Marketplace Researchers Screen the Quality of Offsets Reported in this Survey?

Because the aim of this report is to account for all voluntary payments for emissions reductions, we do not apply any quality criteria screens for offsets included in calculations. However, we did follow up with dozens of respondents to confirm or clarify survey responses that were incomplete or raised a red flag. This included any responses that varied significantly from "typical" market behaviors and thus would also significantly influence market trends. In a few cases where we were unable to confirm that transactions occurred, these responses were omitted.

Voluntary Carbon Offsetting 101

Voluntary Offsetting Motivations and Markets

Voluntary demand for carbon offsets is driven by companies and individuals that take responsibility for offsetting their own emissions (“purely voluntary” demand), as well as entities that purchase “pre-compliance” offsets before emissions reductions are required by regulation.

Purely voluntary offset buyers are driven by a variety of considerations related to corporate social responsibility (“CSR”), ethics, and reputational or supply chain risk. Pre-compliance buyers speculatively procure offsets before a compliance carbon market start date, hoping to obtain a lower price than what the same offset may eventually fetch in the compliance program.

The most active compliance carbon offset program is the United Nations **Clean Development Mechanism** (“CDM”), the source of offsets for Kyoto Protocol Signatory Countries and buyers in the European Union Emissions Trading Scheme (“EU ETS”). Existing or emerging carbon markets can also be found in China, California, South Korea, South Africa, Kazakhstan, Mexico, New Zealand, and several other jurisdictions.

Voluntary markets co-exist with compliance offset markets driven by mandated caps on greenhouse gas (“GHG”) emissions, which operate at a significantly larger scale. What the voluntary carbon markets lack in size, they make up for in flexibility – spinning off innovations in project finance, monitoring, and methodologies that also influence regulatory market mechanisms. For example, the voluntary carbon market has spawned its own standards, registries, and project types beyond the scope of existing compliance market mechanisms. In turn, in recent years governments worldwide have increasingly turned to voluntary carbon market mechanisms – particularly standards and registries – to inform the development of or serve as compliance instruments themselves.

The Project Cycle and Standards

Carbon offset projects are implemented to reduce, avoid, or sequester greenhouse gases. Each carbon offset represents one tonne of GHGs reduced that

can then be purchased to cancel out or neutralize a comparable volume of GHG emissions elsewhere.

Project developers create carbon offsets according to a methodology describing how a project will be implemented and how climate benefits are to be measured. There are currently dozens of **independent standards** offering methodologies that can guide offset project development. Some standards develop methodologies internally with support from external stakeholders. Others enable external parties to develop and propose new methodologies which are subjected to an approval process prior to use.

Project developers engage in several preparatory steps to project implementation that vary by project type and methodology requirements. This typically includes producing a **Project Idea Note** (“PIN”) that gives shape to project plans; various project feasibility, impact, and risk assessments; stakeholder input sessions; and numerous other early-stage preparations.

Once a methodology is available, developers produce a **Project Design Document** (“PDD”) that details project design; anticipated emissions reductions; plans for quantifying and monitoring the delivery of climate and other social and environmental benefits; assesses projects’ arguments that the project activity exceeds “business-as-usual” (“BAU”) reductions and avoids emissions leakage; and other technical issues. Validation is the process by which a third-party auditor examines a project’s planning documents and proposed framework (including the PDD), affirming its ability to deliver expected outcomes.

Following a period – sometimes years – of project implementation, monitoring, and documentation, another audit process called **verification** assesses the delivery of GHG mitigation and any additional “co-benefits”. This confirms the total volume of emissions that the project has reduced over time. After tonnes are verified, they can be **issued** by an offset project registry – which assigns each tonne a unique serial number that stays with the offset as it changes hands and is ultimately retired.

Table 1: Basic Project Cycle by Popular Standards

Clean Development Mechanism	
Project Cycle: Early Stages	Project Cycle: Late Stages
PIN > PDD Design > Host Country Approval > Validation > Registration >	Monitoring > Verification > Issuance > Forwarding >
Verified Carbon Standard	
Project Cycle: Early Stages	Project Cycle: Late Stages
PIN > PDD Design > Validation > Registration >	Monitoring > Verification > Issuance > Transfer of offset ownership >
The Gold Standard	
Project Cycle: Early Stages	Project Cycle: Late Stages
PIN > Local Stakeholder Input & PDD Design > Stakeholder Consultation Feedback and Report > Validation > Registration >	Monitoring > Verification (Carbon, Sustainability Monitoring Reports) > Gold Standard Review of Verification > Issuance > Transfer of Credit Ownership >

Source: Standard website information: <http://www.cdmgoldstandard.org/>; <http://v-c-s.org/>; <http://cdm.unfccc.int/>.

Offset Retirement

When a buyer desires to **retire** an offset so that it can no longer be re-sold, the registry designates the offset as “retired” in the offset owner’s account. Often, offset suppliers will retire an offset on behalf of their buyer without transferring offset ownership to them and publicly acknowledge the offsetter’s name on the registry for others to see. Offset suppliers may retire offsets regularly or intermittently, in bulk. They may also choose whether or not to make this or any registry information available for public view.

Offsets are typically issued on a registry in order to be formally retired – to demonstrate that the tonne has been verified as “real” and to enable the buyer to claim that emissions have been neutralized. While many offset buyers seek issued offsets for this purpose, some may desire to use their CSR resources to catalyze new project development by supporting earlier-stage activities. Thus, some offsets are forward-contracted for future delivery once the project has successfully verified and issued tonnes. Both early and late stage transactions are tracked in this report series.

“Over-the-Counter” Versus Exchange Contracts

The majority of voluntary offset buyers obtain offsets through decentralized “**over-the-counter**” (“OTC”) transactions. These are bilateral contracts between

buyers and sellers that define the terms of payment and offset delivery. A small volume of offsets are also obtained on private exchanges.

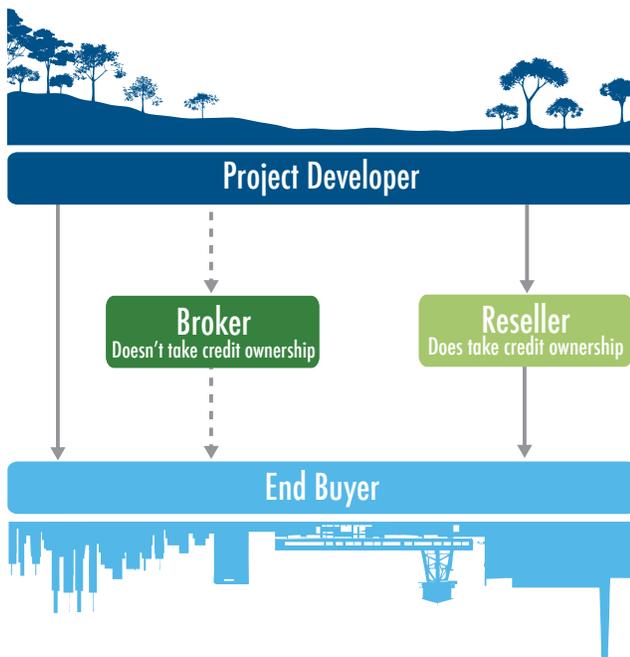
This report primarily focuses on OTC transactions, the source of most offset transactions and market value, as **exchange activity** is less common. From 2004 to 2010, however, a significant volume of voluntary offset transactions occurred on the Chicago Climate Exchange (CCX). The CCX was a cap-and-trade system that organizations joined voluntarily, making legally binding commitments to track and reduce their GHG emissions. The exchange was launched as a pilot program and completed its final trades in 2010. Today, CCX continues to administer a voluntary offset program and registry.

Voluntary Offset Supply Chain

In compliance carbon markets, formal exchanges and several layers of intermediaries drive market liquidity and transparency. In the voluntary carbon markets, there are typically only three layers – project developers, brokers, and retailers or wholesalers.

The term “**offset project developer**” is a catch-all phrase to describe activities that may be carried out by many different entities. “Project developer” often (but not always) describes the organization that acts as carbon asset developer – developing concept and feasibility studies and the PDD, and seeing the project through validation, monitoring activities

Figure 14: The Voluntary Carbon Markets Value Chain



Source: Forest Trends' Ecosystem Marketplace.
State of the Voluntary Carbon Markets 2014.

and, ultimately, verification. Depending on project type and circumstance, this organization may differ from the actual project owner; from local partner organizations involved in project implementation; from project financiers/investors; and from the organization actually selling offsets to end users. Additionally, a separate aggregator may pull together several of these disparate functions.

Offset retailers do not traditionally manage project development and documentation. Instead, they contract with project developers to take ownership of a portfolio of offsets that they then offer to end users. Because their role is more end user-facing, they typically also offer other corporate carbon management services that may also include internal emissions reductions strategies and public relations tied to the overall corporate environmental strategy – including offset use.

Brokers do not take ownership of offsets, but facilitate transactions between project developers and end users; project developers and retailers; and between retailers. They do this for a fee. There are currently only a handful of active brokers in the voluntary offset marketplace. When given the opportunity, some retailers will also perform this role, but generally not at significant volumes.

Throughout this report, the initial offset contract between a project developer and an end user or other intermediary is referred to as the **primary market**. The **secondary market** consists of transactions between retailers and retailers, or retailers and offset end buyers.

Offset Buyers and Suppliers: How They Connect

Offset buyers may take one or several available routes to identify an offset supplier and choose offset types. Because voluntary offset transactions do not occur on any formal exchange where buyers are easily identified, offset suppliers report that the time required to find a buyer can be the most costly aspect of their business. Wait times may range from a few months to several years.

As seen in Section 1.4, many voluntary offset end use buyers rely on offset retailers to guide their decisions and procure offsets. Buyers may identify an offset retailer by looking to **industry associations** like the International Carbon Reduction and Offsets Alliance (ICROA). They may also **partner with organizations and campaigns** like the Global Alliance for Clean Cookstoves or the Code REDD campaign. Project developers and retailers engage with these organizations in order to gain access to end users through association-based events, introductions, mailings, and other outlets for exposure. Project developers wishing to sell their offsets to retailers may pursue **commercialization agreements** that grant retailers the exclusive right to market projects' offsets to their clients with some form of return to projects.

Some buyers may assemble **advisory committees** of NGOs, third-party carbon offset project standards and other stakeholders to guide their offset purchase decisions. They may also identify suppliers from a company or industry list of approved vendors. Public **Requests for Proposals** ("RFPs") are another approach whereby end buyers – and in some cases retailers grappling with large contracts – will issue tenders specifying their offset requirements. In some cases RFPs will be made publicly available online, while others are sent only to project developers and retailers with which the buyer has some familiarity. Buyers and suppliers may also connect via international carbon or other industry-specific conferences, or simply engage in "cold calling".

An emerging approach taken by offset buyers is to consider offset project opportunities that address emissions within their supply chain or **sphere of influence**. As discussed in Section 4.3, this may not always mean that the project bears a direct relationship to buyers' operations but may be located in a relevant region or sector – thus helping to narrowing the field of offset options.

Market and Report Limitations

While companies have voluntarily offset their emissions for over two decades, the vast majority of this activity has occurred in the last 5 years. Because voluntary offsetting is largely unregulated but also driven by corporate climate actions, many self-regulating tools have quickly emerged that aim to assure buyers of the environmental impact of their purchases.

As such, this marketplace has matured rapidly. However, demand continues to rest with those actors with the desire and discretionary income to voluntarily

purchase offsets. In reality, this represents a small number of buyers and transactions when compared to the volume of trades that occur daily to weekly in a commoditized, compliance-based carbon market.

In comparison to more active marketplaces, voluntary buyers are not always at hand, and offset prices are highly stratified and unpredictable, even within similar classes of offsets. The details of payment and offset delivery vary tremendously from one project to the next, as do the projects' design, risk, start date, and other factors that contribute to their eventual price. Therefore, to produce a traditional market report that offers intra-year trading data or forecasts would be impossible if not misleading.

What this report series aims to offer is a year-on-year, survey-based exploration of trends in offset supply and demand – to illuminate disruptive innovations, emerging or distressed markets, and the impact of broader regulatory, economic, and consumer signals.

1. Market Overview

1.1 Market Performance in 2013

In 2013, voluntary buyers purchased 76 million tonnes of carbon offsets (MtCO₂e) for immediate or future delivery, falling short of 2012 levels by 26.7 MtCO₂e. Surveyed offset suppliers attributed a slight 3.8 MtCO₂e (or 5%) of this decline to dampened demand from traditional voluntary offset buyers taking action on climate change for environmental, commercial, or political purposes. Millions of the remaining “lost” tonnes were probably still transacted – but not voluntarily. When the US State of California’s mandatory cap-and-trade program came into force in January 2013, many buyers that had voluntarily bought offsets in prior years

(averaging 10 MtCO₂e/year) as “pre-compliance” last year began obtaining the same offsets – which had their origins in the voluntary market – to comply with the law.¹⁰

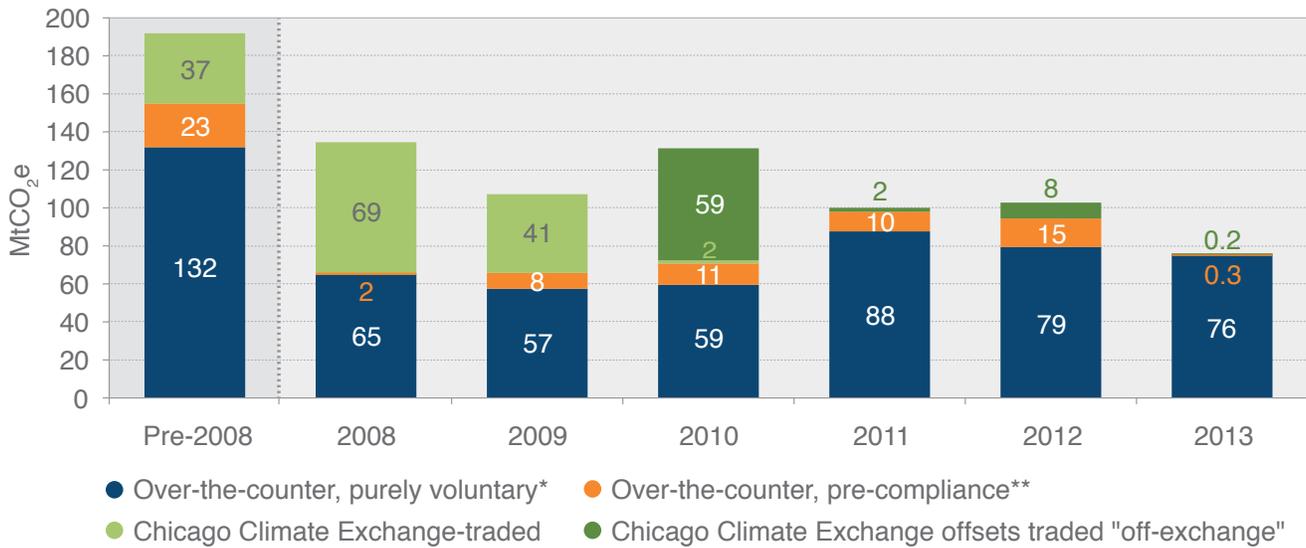
Compared to around 15 million tonnes of carbon offsets purchased for pre-compliance in 2012, 2013’s offset suppliers reported just 300,000 tonnes of such demand (Figure 15). Diminished pre-compliance activity was driven not only by California’s market launch, but also from the disintegration of Australia’s pre-compliance market as the country failed to sustain its offset-inclusive carbon tax. Offset sales in the United States (US) also ceased to reflect any expectation of a national carbon market, which had

KEY FINDINGS

- Offset suppliers transacted 76 MtCO₂e of carbon offsets in 2013 – down from 102.8 MtCO₂e in 2012 – as structural changes in California’s carbon market affected millions of previously “voluntary” tonnes. Market value fell to \$379 million, tracking alongside lower average prices (\$4.9/tCO₂e market-wide).
- Across all years of market activity tracked in this report series, voluntary buyers have directly funded 844 MtCO₂e in emissions reductions worth \$4 billion, at an average historical price of \$5.9/tCO₂e.
- Offset suppliers retired a record volume of offsets (53 MtCO₂e) on buyers’ behalves. Including 2013 retirements, approximately 15% of voluntary offsets transacted historically have also been retired (119.2 MtCO₂e) – with 44% of them retired in 2013.
- Approximately one-fifth of market value (\$41.6 million) can be classified as early-stage “impact investment” intended to catalyze new project activities, while the remaining 80% of transactional value was associated with validated projects (\$57 million) or verified and issued tonnes (\$124 million).
- Private sector suppliers continue to outpace non-profit and public sector suppliers, transacting 59 MtCO₂e last year. Public sector operators of domestic voluntary offsetting programs meanwhile experienced a major boost in finance for domestic emissions reductions, contracting nearly 10 MtCO₂e as a result of individual and corporate actions, and voluntary donor country finance for forestry.
- Last year’s decline in market activity was deeply felt by project developers, which transacted 40% less volume than in 2012. This drop was primarily seen among developers of project types that were perceived to be oversupplied – particularly in the hydropower category.
- Offset retailers and wholesalers experienced relative market stability in 2013, seeing only a 2% decrease in transaction volumes, which points to their continued role as an important source of market activity and price stability.

¹⁰ These offsets are therefore no longer tracked in this report series unless reported as sold to voluntary buyers.

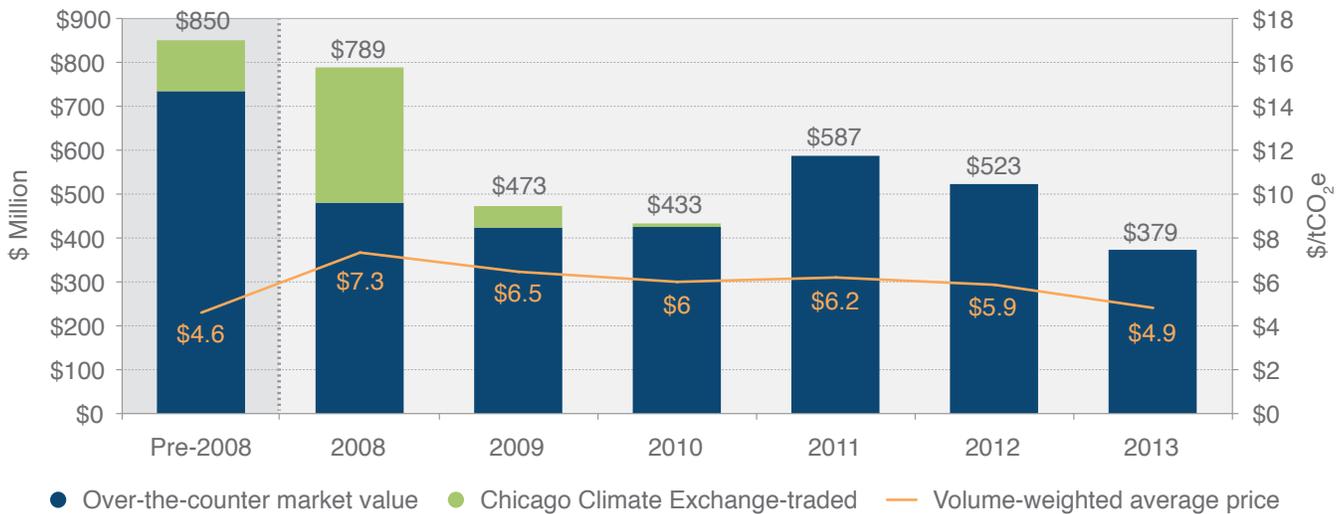
Figure 15: Historical Offset Demand by Transacted Volume, All Markets



Notes: Based on 844 MtCO₂e of offsets transacted and reported to Ecosystem Marketplace over 8 survey years.
 *Defined as all offsets transacted for the purpose of retirement.
 **Defined as all offsets transacted for resale to or use by future regulated entities.

Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

Figure 16: Historical Offset Demand by Market Value and Average Price, All Markets



Notes: Based on \$4 billion in voluntary offset market value transacted and reported to Ecosystem Marketplace over 8 survey years.

Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

once driven significant activity on the now-shuttered Chicago Climate Exchange (CCX).¹¹ Activity under the CCX legacy program constituted 8.3 million tonnes transacted in 2012 that did not see a repeat in 2013.

The CCX was the voluntary offset market's only significant source of exchange-driven activity. Since its closure, the vast majority of offset transactions are negotiated directly and bilaterally, or "over-the-counter" (OTC).

¹¹ While CCX's legally binding but voluntary cap-and-trade program ceased operations at the end of its first trading phase in 2010, the IntercontinentalExchange-owned program continues to make its registry system and offset project methodologies available to market participants.

Figure 17: Transacted Volume by Average Price, 2012-2013



Notes: Based on 910 reported transaction prices associated with 76 MtCO₂e.

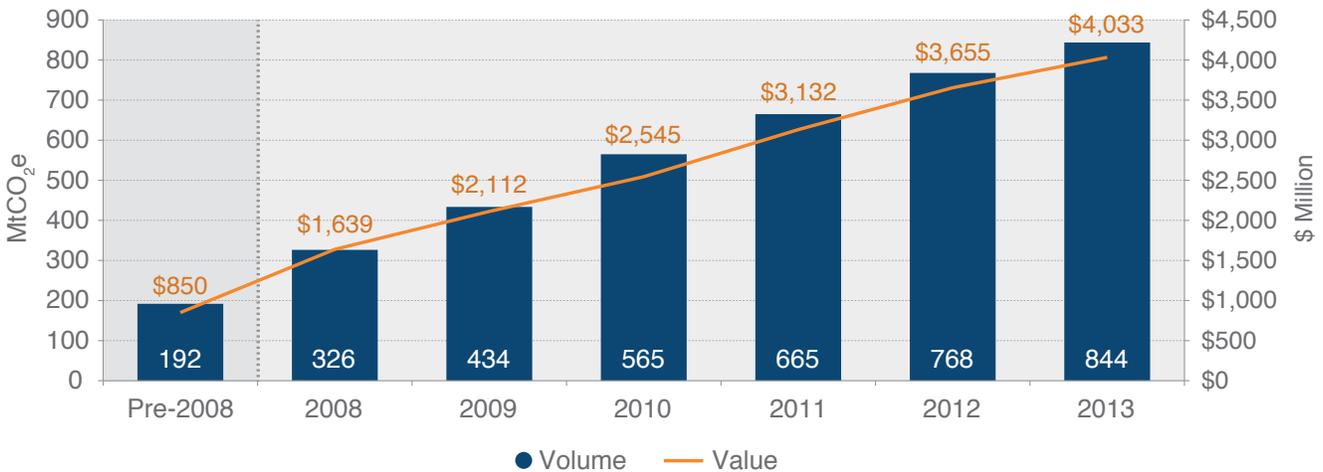
Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

The value of 2013's voluntary carbon offset market decreased by 28% to \$379 million, from \$523 million in 2012. This decline reflects a downward trend in average offset prices across several of the market's most popular activities that put significant pressure on overall market value. The global average price of offsets sold to voluntary buyers fell 16% to \$4.9/tCO₂e, a full \$1/tCO₂e below 2012's average \$5.9/tCO₂e – which is also the market's historical average price (Figure 16).

As seen in Figure 17, offset transaction volumes decreased at both the expensive (>\$10/tCO₂e) and inexpensive (<\$1/tCO₂e) ends of the price spectrum, seeing a significant spike in activity within range of the market's average \$4.9/tCO₂e. The same analysis illustrates the voluntary OTC market's lack of price transparency due to the absence of any formal exchanges that would provide market liquidity. As seen here and throughout this report, last year's lower average price for voluntary offset transactions is the aggregation of close to 900 reported price points that vary greatly by project standard, location, and technology – ranging from less than \$.1/tCO₂e to over \$100/tCO₂e in 2013.

Approximately one-fifth of market value (\$41.6 million) can be classified as early-stage "impact investment" intended to catalyze new project activities, while the

Figure 18: Cumulative Offset Demand by Market Volume and Value



Notes: Based on 844 MtCO₂e and \$3.6 billion in voluntary offset market value and volume transacted and reported to Ecosystem Marketplace over 8 survey years

Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

¹² See Section 3.5 for more information about project stage.

remaining 80% of transactional value was associated with projects that had been validated (\$57 million) or that had successfully verified their emissions reductions and issued them as offsets on a registry (\$124 million).¹² Over all of the years of market activity tracked in this report series, including 2013, voluntary buyers have funded 844 MtCO₂e in emissions reductions worth \$4 billion.

1.2 Offset Retirement: Walking the Talk

Organizations seeking to neutralize their carbon emissions must “retire” the offsets they purchase – thus taking them out of circulation so the offsets cannot be re-sold to other market participants. Offset registry systems execute this process, tracking individual offsets as they enter the market, change ownership, and are ultimately retired in their systems.¹³

According to data reported by all major offset registries (Figure 19), offset suppliers retired a record volume of offsets – 53 MtCO₂e – on buyers’ behalves in 2013. Including last year’s retirement volumes, approximately 15% of voluntary offsets transacted historically have also been retired (119.2 MtCO₂e) – with 44% of them retired in 2013. From another angle, this volume represents over one-third of the 313

MtCO₂e that have been issued by registries over time. Only this pool of issued offsets is eligible for retirement.

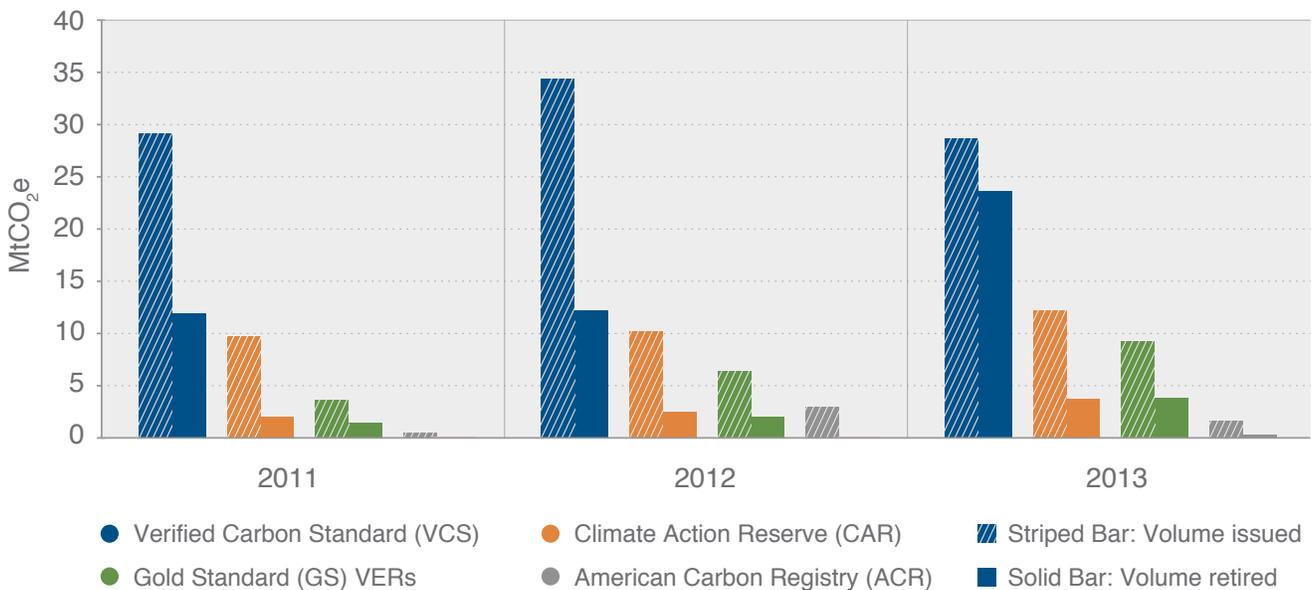
Voluntary offset suppliers point to this figure as a clear demonstration of the market’s ability to deliver results and make good on their obligations to buyers over time – particularly as the volume of verified emissions reductions (VERs, also known as voluntary emissions reductions) grows (tracked as “issued” tonnes). In 2013, 35.4 MtCO₂e or 71% of offsets for which suppliers reported a project stage were verified and issued tonnes from projects listed on a third-party registry.

1.3 Profit Status: Suppliers by Sector

Carbon offset suppliers are challenged to juggle both environmental and financial outcomes in this marketplace, which uniquely unites the realms of philanthropy and commodity. In this arena, organizations from all sectors – private, public, and non-profit – supply carbon offsets.

Private sector suppliers continue to outnumber non-profit and public sector suppliers, as they have since 2005. In 2013, for-profit offset suppliers transacted 59 MtCO₂e, compared to non-profit organizations that supplied 8.9 MtCO₂e. Public sector operators of

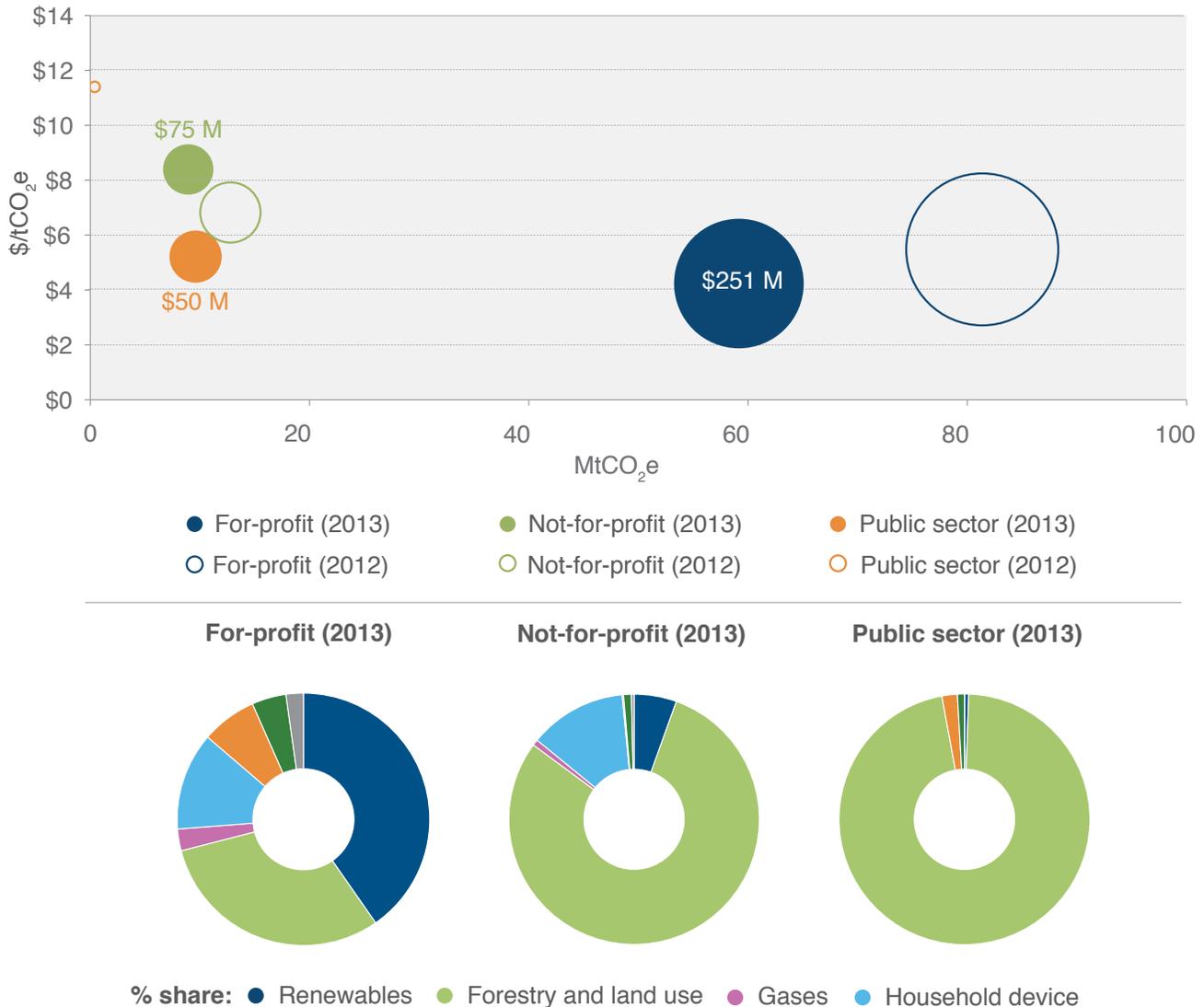
Figure 19: Historical Voluntary Offset Issuance and Retirement by Major Third-Party Project Standards



Source: APX Inc. and Markit Environmental Registry as reported to Forest Trends’ Ecosystem Marketplace.

¹³ See “Voluntary Offsetting 101” for more information about this process.

Figure 20: Transacted Volume, Average Price, Value and Share of Offsets Supplied by Project Category and Offset Supplier Profit Status, 2013



domestic voluntary offsetting programs meanwhile government entities fell to \$5.2/tCO₂e from \$11.4/

Notes: Based on 221 organizations reporting 76 MtCO₂e transacted.

Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

experienced a major boost in finance for domestic emissions reductions, seeing contracted volumes rise to nearly 10 MtCO₂e (from just under 400,000 tonnes in 2012) as a result of individual and corporate actions, alongside voluntary donor country commitments to finance Reduced Emissions from Deforestation and forest Degradation with social and sustainable agricultural benefits (REDD+) in developing countries.

In line with this increased scale of public sector offset supply and action, per-tonne prices paid to

tCO₂e reported in 2012. After several years of near-convergence between prices paid to for-profit and non-profit entities, last year saw the spread widen as non-profit suppliers transacted offsets at an average of \$8.4/tCO₂e, while for-profit entities' transactions were typically priced around \$4.2/tCO₂e.

While for-profit offset suppliers transacted the largest volume of low-priced offsets from renewable energy, they were also behind the vast majority of offset transactions from projects that deliver clean

Figure 21: Transacted Volume and Average Price by Supplier Role, 2012-2013



Notes: Based on 221 organizations reporting 76 MtCO₂e transacted.

Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

or more efficient cookstoves and water filtration devices which buoyed their overall average price. In the forestry sector, the combined offset supply provided by not-for-profit and public sector actors nearly matched the 14 MtCO₂e supply offered by private sector entities.

1.4 Value Chain: From Supplier to Buyer

No two voluntary carbon offset suppliers are alike; but depending on their position in the supply chain, sellers can be categorized into three major types:

Project developers develop and implement emissions reduction projects directly or might support the development of the “carbon asset” – developing and shepherding project documentation through approval processes – without owning the project and instead relying on local implementing partners. Project developers generate and sell offsets to offset retailers or directly to end buyers.

Retailers/wholesalers take ownership of a portfolio of offsets (sourced from project developers and in some cases other wholesalers/intermediaries) to sell to offset end users such as companies or individuals. In addition to offset sales, they often also engage in other carbon management advisory and communications services.

Brokers do not own offsets, but facilitate transactions between sellers and buyers (either retailers or offset end users).

This report also occasionally draws a distinction between primary and secondary market transactions. **Primary transactions** are defined in this report series as the initial sale of offsets from the project developer into the “secondary market” of retailer intermediaries or to offset end users. The secondary market represents transactions reported by retailers/wholesalers that are transacted amongst themselves or (more commonly) sold to offset end users.

In order to understand suppliers' activities throughout the supply chain, we asked them to identify their role in each offset transaction. As seen in Figure 21, last year's decline in market activity was deeply felt by project developers, which transacted 40% less volume than in 2012. This drop was primarily seen among developers of project types that were perceived to be oversupplied – particularly in the hydropower category. Previously the market's most active offset supplier type, project developers held an extremely narrow lead in transaction volumes, with less than 1 MtCO₂e separating them from their retailer counterparts.

Developers nonetheless secured the market's highest average prices last year (overall average

of \$5.9/tCO₂e). Approximately \$134.5 million was transacted by project developers, which represents the size of the primary market for voluntary offsets.

The secondary market made up the larger market share by volume in 2013, responsible for 29 MtCO₂e transacted. Offset retailers and wholesalers experienced relative market stability in 2013, seeing only a 2% decrease in transaction volumes, which points to their continued role as an important source of market activity and price stability.

Approximately 7 MtCO₂e or nearly 12% of market activity flowed through brokers, down 58% from 2012 when brokers were actively facilitating transactions of pre-compliance tonnes bound for California's cap-and-trade program. The absence of brokered pre-compliance transactions is evident in the significantly lower average price associated with these market actors (\$1.3/tCO₂e, down from \$5.6/tCO₂e in 2012). Overall, the market value of secondary transactions was 22% less (at \$105.4 million) than the size of the primary market.

2. Offset Origins

2.1 Project Type: Technologies and Techniques

The voluntary carbon markets' unit of trade is standardized – equal to one tonne of carbon dioxide that's spared from the atmosphere. Even so, the emissions reductions themselves are generated by thousands of technologies and approaches in dozens of countries and verified according to a suite of different standards – all of which shape their desirability, availability, and price. This section explores the origins of offsets transacted over the counter in 2013: the project types, locations, and other factors that begin to differentiate each offset from the next – and ultimately determine their appeal to end buyers.

Voluntary offset buyers are ever more discerning in their offset purchases, with major corporations focusing

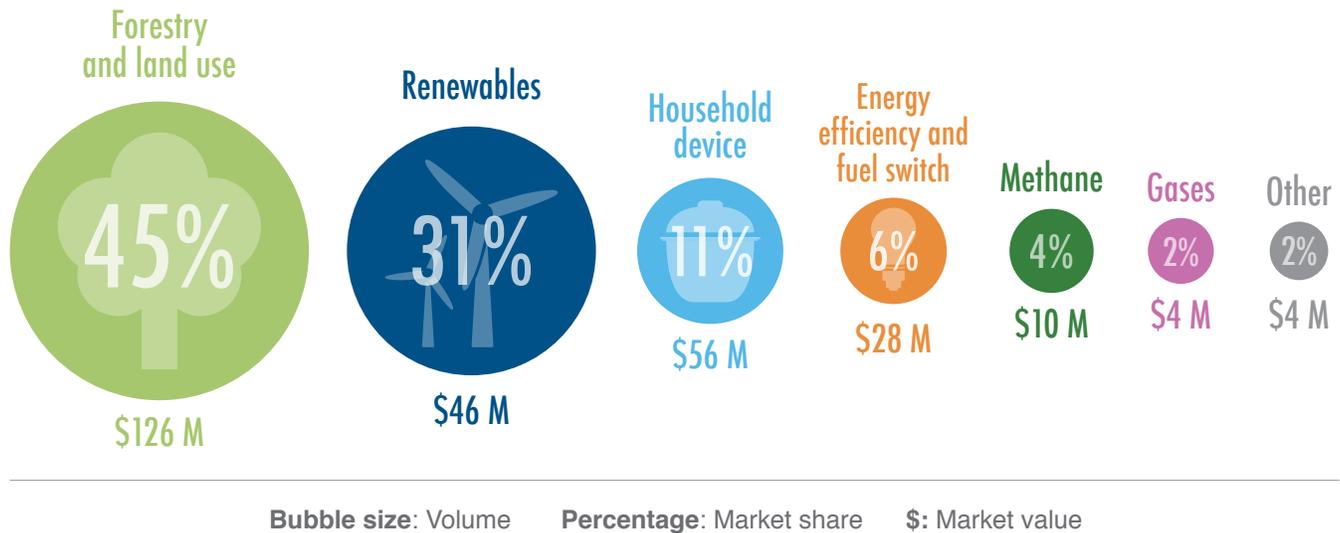
their purchasing efforts on offset projects that feature tangible environmental, health, and social contributions commonly known as co-benefits. It is in this context that offsets from forestry projects surged in popularity in 2013, when offsets generated by forestry and land-use projects constituted the lion's share of voluntary offset purchases, behind 27 MtCO₂e or 45% of transacted offsets associated with a project type. That figure includes a record volume of offsets transacted from REDD+ projects.

Renewable energy projects – long a popular project category among voluntary offset buyers in large part due to their widespread availability and relative affordability – ceded the top spot to forestry offsets as they also became more affordable. A total of 18.7 MtCO₂e were transacted from renewable energy

KEY FINDINGS

- In 2013, offsets generated by forestry and land-use projects supplied the lion's share of voluntary carbon offset transactions, totaling 27 MtCO₂e transacted or a 45% share of the marketplace compared to 32% in 2012. These projects displaced renewable energy projects – which transacted 18.7 MtCO₂e transacted – as the most popular category among voluntary offset buyers.
- REDD activities were the most popular individual project type, transacting 23 MtCO₂e – almost triple their transaction volumes from 2012 and topping 2010's record 18.7 MtCO₂e. REDD offsets' popularity was due in part to their lower average price of \$4.2/tCO₂e, down from \$7.4/tCO₂e in 2012.
- Wind energy projects were the source of another 13.9 MtCO₂e of transactions – a 9% drop from 2012 – while the average price of these projects declined 36% to an average \$2.1/tCO₂e in response to perceived oversupply and competition with similar but even lower-priced international compliance offsets.
- Transacted carbon offsets generated from clean cookstove distribution fell 26% to 4.3 MtCO₂e as new supply came online amidst falling prices (down 18% to \$9.2/tCO₂e in 2013), driving several large project developers to instead court sovereign governments offering lower-priced but higher-volume contracts in the compliance markets.
- Afforestation/Reforestation (A/R) offset transaction volumes fell dramatically by 70% to 2.6 MtCO₂e from a record 8.8 MtCO₂e in 2012, while Improved Forest Management (IFM) transactions also fell 67% to 1.2 MtCO₂e. Both decreases were largely attributed to market restructuring including many IFM projects' shift in focus to California compliance buyers, and Australia's failure to maintain regulatory certainty around its future carbon-price-associated offset market.
- In 2013, carbon projects located in 59 different countries on every relevant continent successfully sold offsets to voluntary buyers hailing from 32 different countries. Projects in Latin America supplied the largest volume of transacted offsets – primarily from forestry activities.

Figure 22: Market Share and Value by Project Category, 2013 (% Share and \$ Million)



Notes: Based on survey responses representing 60 MtCO₂e transacted.

Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

projects in 2013, compared to 26 MtCO₂e in 2012. Three of every four offsets transacted were from one of these two project categories.

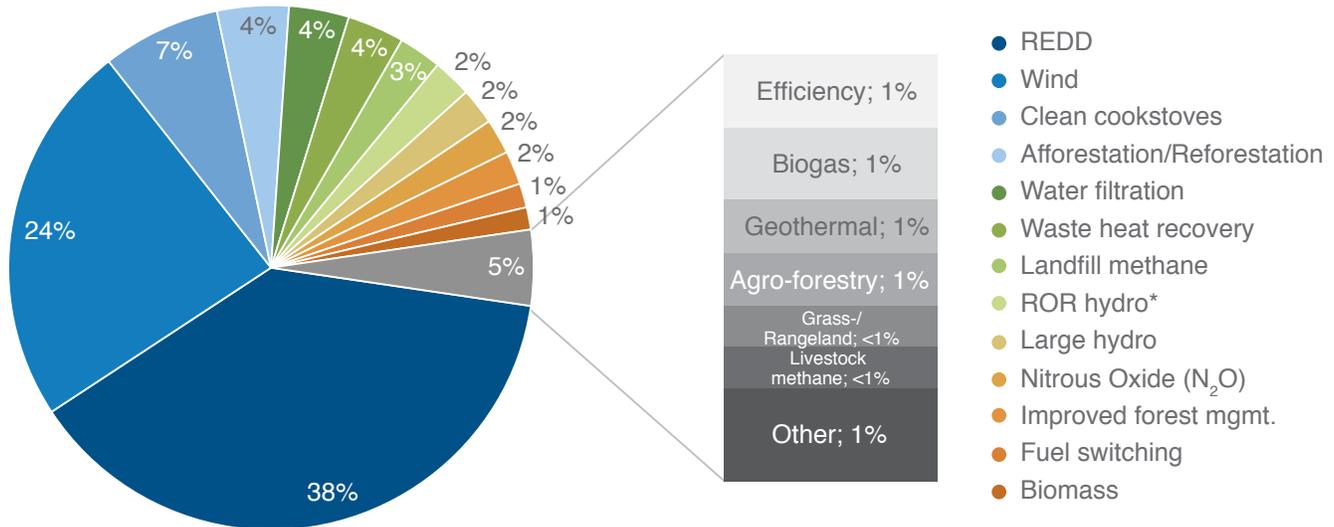
The next most popular project category was household device distribution – a category added to last year's State of the Voluntary Carbon Markets report in light of a growing movement to distribute cleaner-burning cookstoves and water purification devices in developing countries as a way to both immediately reduce emissions and to set communities on a path to sustainable development. The market share for offsets transacted from these project types grew last year, though their absolute transaction volumes fell by 10% to 6.4 MtCO₂e in 2013, from 7.2 MtCO₂e in 2012. Other project types, such as energy efficiency and fuel switching and the capture of methane and other potent greenhouse gases, all saw their market shares fall in 2013 amid the surge in forestry purchasing, market restructuring, and overall decline in voluntary offset demand.

REDD regained popularity, but demand still a challenge

Offsets transacted from REDD+ projects reached new heights in 2013, resulting from both corporate and public sector demand. At least 22.5 MtCO₂e of REDD+ offsets were transacted, exceeding 2010's previous record of 18.7 MtCO₂e. A full 8 MtCO₂e were associated with German development Bank Kreditanstalt für Wiederaufbau (KfW) 2013 commitment to pay the Brazilian state of Acre for its performance in mitigating forest carbon emissions, which Acre will retire on behalf of Germany's REDD Early Movers program (REM). This follows from previous similar agreements between REM and Acre that have already seen Acre issue and retire over 11 MtCO₂e. Half of these emissions reductions were directly contracted by the Germans for retirement, while the other half represents Acre's "own effort" to reduce additional tonnes on a 1:1 basis to account for project risks. The 2013 agreement takes on a similar structure.¹⁴

¹⁴ Read more about the bilateral agreement here: https://www.kfw-entwicklungsbank.de/International-finance/KfWEntwicklungsbank/About-us/News/News-Details_20353.html (Last accessed May 15th, 2014). The emissions reductions resulting from this transaction are not used to "offset" any emissions in the traditional sense, nor will they be canceled against any compliance obligation. This report series nonetheless tracks all payments for emissions reductions that are contracted and accounted for on a per-tonne basis, and particularly if they are retired. The REM Programme's transaction therefore meets this survey's methodological requirements for inclusion.

Figure 23: Market Share and Value by Project Type, 2013 (% Share)



Notes: Based on survey responses representing 60 MtCO₂e transacted.

Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

This significantly-sized commitment helped to move the mark in forests' favor and establish a proof of concept for governments wishing to finance, monitor, and deliver forest carbon emissions reductions by non-market-based means. On the other hand, finding new sources of market demand for traditional REDD offsets remained a challenge for the market's swelling ranks of large-scale projects. To make a dent in the market's growing supply, major corporations such as Disney Company and Natura Cosméticos voluntarily supported REDD projects in 2013, while the Code REDD Campaign continued to drum up private sector support through large-scale convenings. Many market participants are eyeing compliance markets as a potentially stable and significant source of demand. With an international climate agreement still years away, the most prominent short-term hope for compliance-driven REDD offset demand comes from California.

In July 2013, the REDD Offsets Working (ROW) Group – a multi-stakeholder technical group formed to examine the legal, policy, and technical elements of sectoral-based REDD programs to support California regulators' decision-making related to international REDD+ – released a set of guidelines that limit accepted offsets to those from jurisdiction-scale REDD+ programs. Regulators from the California Air Resources Board (ARB) more recently expressed their commitment to consider recognizing REDD offsets generated by programs of this scale. California's

regulations mandate that the ARB engage in another rule-making process before REDD offsets are allowed into the program, however, and regulators refuse to commit to a timeline for the possible inclusion of REDD in their compliance market.

Market participants recognize that California-driven demand is not a panacea for the demand challenge due to California's proportionate restrictions on offset use – but it's a start.

"California is obviously not going to buy all of Brazil's credits, but putting a signal that says 'there is a compliance carbon market out there that accepts this and here's what the rules look like' would be enormously powerful," said Steve Schwartzman, Director of Tropical Forest Policy at Environmental Defense Fund.

The lack of an existing or even pending compliance market for REDD puts these projects in a risky position given their strict reliance on voluntary project finance which leads to a supply and demand imbalance, said Brian McFarland, Director of Carbon Projects and Origination for CarbonFund.org. Ideally, either a compliance market or forward purchase commitments designed by a multi-lateral agency such as the United Nations' (UN) REDD program or the World Bank's Forest Carbon Partnership Facility (FCPF) would help reduce uncertainty for private investors, he said.

The FCPF's Readiness Fund has disbursed about \$17 million in grants to 18 countries to date, with agreements signed for millions more. But its Carbon Fund is reserved for countries that have made significant progress in their REDD+ readiness efforts and are sufficiently equipped to facilitate performance-based payments for emissions reductions. In fall 2013, the Government of Costa Rica and the FCPF signed a Letter of Intent to jointly pursue an Emission Reductions Payment Agreement valued at up to \$63 million. More recently, the FCPF selected REDD+ proposals from Nepal, Ghana, Mexico, and the Democratic Republic of Congo (DRC), which could allow each country to receive between \$50 million and \$70 million in financing. The DRC is also looking to tap the UN's REDD program for \$1 billion to protect nine million hectares of rainforest with technical support from voluntary market REDD project developer Wildlife Works.

REDD's expanding market in 2013 compensated for a significant decline in demand for offsets generated from A/R, of which transacted volumes fell by 70% to 2.6 MtCO₂e. A/R's formerly steady demand was attributed to a few large-scale corporate programs which continued in 2013, but also to pre-compliance demand in Australia, which ground to a halt last year in the face of regulatory uncertainty. IFM volumes also fell 67% to 1.2 MtCO₂e, a decline that can be explained in part by the transition of certain forestry offsets out of the pre-compliance voluntary category and into California's cap-and-trade program. In the prior year, pre-compliance demand accounted for more than 1 MtCO₂e transacted from IFM or Avoided Conversion projects in North America. IFM offsets transacted in 2013 were largely attributed to "logged to protected" forests in developing countries.

Renewable energy takes a backseat to REDD

Wind projects remained the most popular renewable energy project type in 2013, with nearly one out of four offsets purchased in 2013 sourced from a wind project – most of which are located in China, India, or Turkey. However, wind projects lost their designation as the most popular project type, as wind offset transactions declined 9% to 13.9 MtCO₂e.

Wind energy offset prices averaged \$2.1/tCO₂e – a price level which in recent years has enabled offset retailers to line their portfolios with these lower-priced offsets and top them off with more expensive types. As the price for previously costly REDD offsets fell

last year, retailers expanded their use within client portfolios at the expense of similarly affordable but less "charismatic" renewable energy offsets. This included wind energy offsets, but meant a more dramatic decline for offsets from hydropower projects – particularly from historically controversial large-scale hydropower projects which saw 1.3 MtCO₂e transacted in 2013 versus 5.1 MtCO₂e in the prior year.

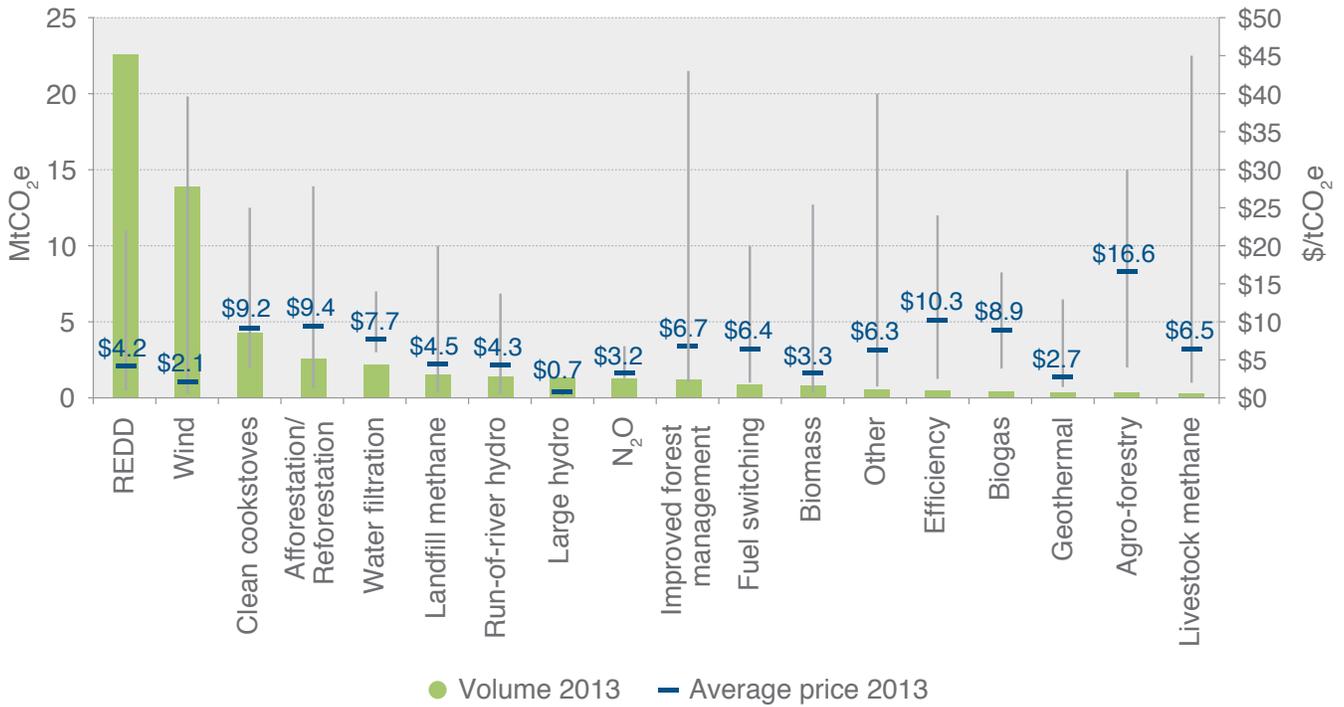
Many renewable energy projects benefit from multiple revenue streams including but not limited to carbon finance. For some of these projects, offset revenues provide an extra push to make the project economically feasible. This diversified income makes these projects slightly more resilient to carbon market fluctuations, which is important given the upfront capital costs of installation. Many project developers in the voluntary offset market have benefitted from the presence of additional compliance market demand for Certified Emissions Reductions (CERs) under the Clean Development Mechanism (CDM). In the absence of CDM revenues, some of those companies that service both voluntary and European compliance offset markets have slowed or halted their market activities, or begun selling CERs to voluntary offset buyers. This trend is discussed below and in Section 3.2.

Cookstove projects stall as developers weigh other financing options

The next most popular project category was "household device distribution" which includes the sale or give-away of cleaner, more efficient, and less harmful cookstoves or water filtration devices. In keeping with broader market trends, the overall volume of transacted offsets from this category dipped to 6.5 MtCO₂e from 2012's 7.2 MtCO₂e, while their contribution to market value declined by nearly one third to \$56.5 million. Buyers continued paying above-average prices for these offsets which transacted at nearly four times the amount paid for the average renewable energy offset (see Section 2.2).

The transacted volume of carbon offsets from clean cookstove projects declined 26% to 4.3 MtCO₂e, from 5.8 MtCO₂e in 2012. Clean cookstove distribution was nonetheless the third-most popular project type among voluntary buyers, market-wide. Another 2.2 MtCO₂e of the offsets transacted in this category were from water purification device distribution. The majority of carbon-financed stoves and filters were distributed to households in Africa, though Asian and Latin American countries also host these projects.

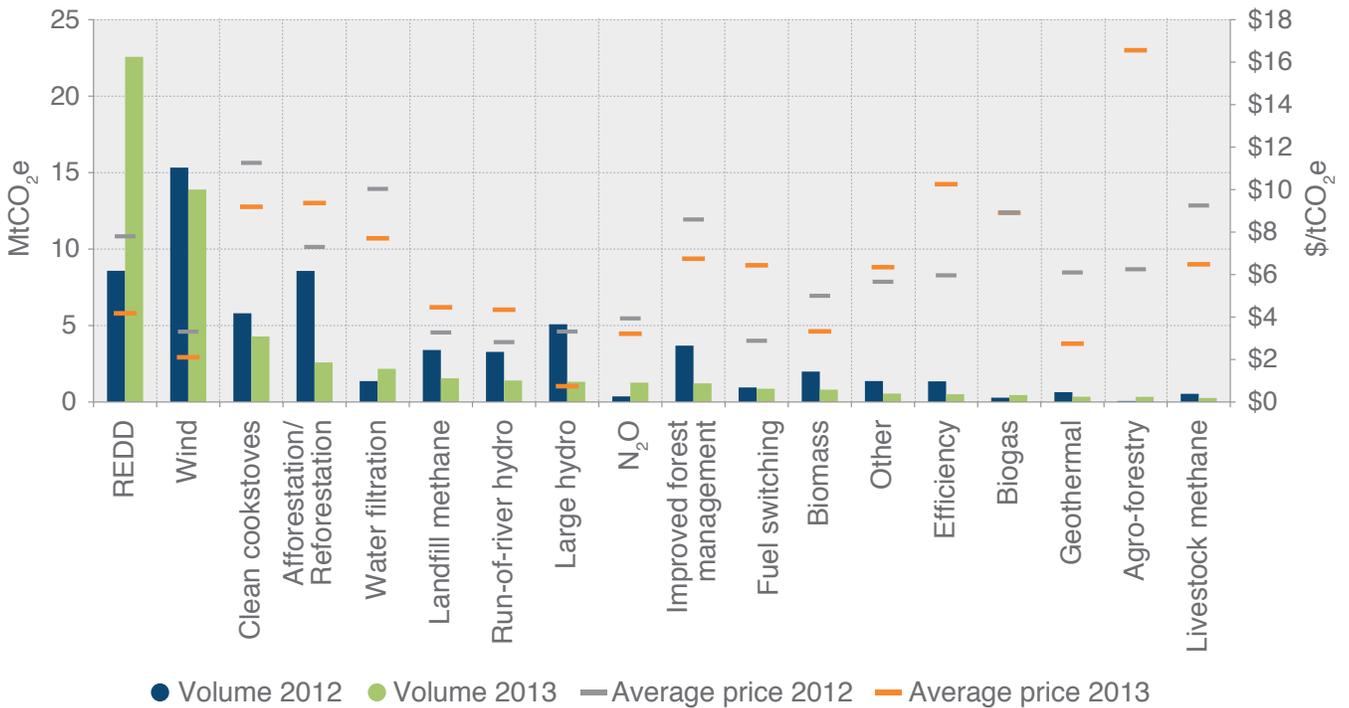
Figure 24: Transacted Volume, Average Price, and Price Range by Project Type, 2013



Notes: Based on survey responses representing 60 MtCO₂e transacted.

Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

Figure 25: Transacted Volume and Average Price by Project Type, 2012 & 2013



Notes: Based on survey responses representing 60 MtCO₂e transacted.

Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

Achieving scale for development-oriented projects such as these continues to drive innovation – including what market participants describe as “baseline innovations” in the form of “suppressed demand.” This approach to calculating a project’s baseline emissions scenario (i.e., what would have occurred without the intervention of carbon finance and the project itself) is based on the idea that poverty prevents many people from burning the volume of fuels that they would consume under better economic circumstances.

Programmes of Activities (PoAs) also enable scale for otherwise disparate distribution activities by simplifying the approval process for incorporating additional activities under one project/programme umbrella. The deployment of PoAs and suppressed demand has led to a significant increase in the volume of offsets issued from these development-oriented projects under The Gold Standard. Overall, The Gold Standard registry reported issuing 1.2 MtCO₂e from household device distribution projects in 2013.

As with other project types, market participants express concern regarding the mismatch between limited demand and growing supply of these offset types, which due to their significant contributions to community development and health have typically been perceived as a luxury item in the offset market. The market’s emphasis on scale for these development heavy-weights originated from a time when trading volumes and prices within the CDM were sufficient to support sizable multi-year contracts that could sufficiently cover up-front costs – while the voluntary market was considered supplementary. Given the CDM’s ongoing price depression, however, many suppliers have shifted focus to voluntary buyers – but say that this limited market alone cannot sustain projects in the long run.

“We haven’t got a viable carbon market to support projects like these,” Mark Meyrick, head of Eneco’s carbon desk, said of the market for cookstove projects. “It’s been quite a challenge for us to try to make this commercially viable as well as giving the necessary support to the projects.”

In 2013, some sovereign governments acknowledged the sector’s dire situation and the need to sustain the

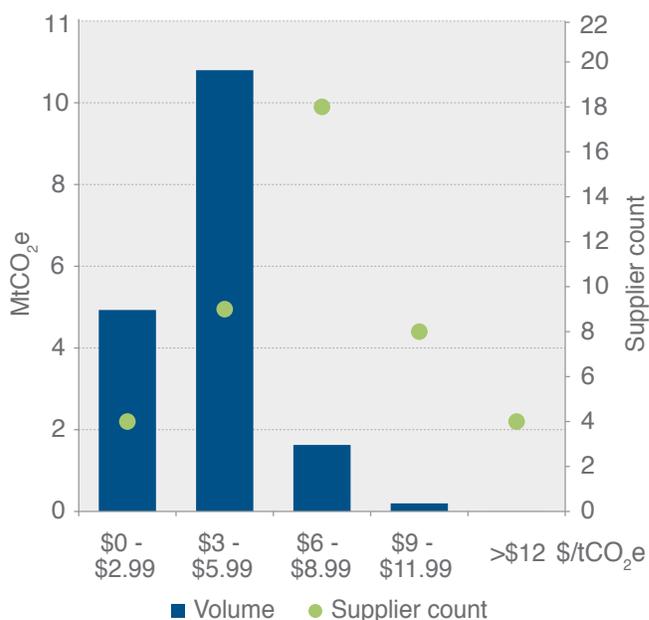
CDM’s more heavily-development-oriented projects – with countries like Sweden voluntarily offering multi-year contracts priced well above the going CER spot price.¹⁵

“The Swedish government is committed to purchasing CERs from projects that have measurable outcomes for their host communities and where a fair carbon price is central to the project’s success,” said the Swedish Energy Agency’s Christian Sommer in an associated 2013 press release.¹⁶

2.2 Offset Price by Project Type

An offset project’s technology or approach is a buyer’s key decision point – but project type alone is not a significant determinant of offset price. Other price considerations include the year in which emissions

Figure 26: Transacted Volume and Count of Suppliers Reporting by Average Price Range for REDD Offsets, 2013



Notes: Based on responses representing 15 MtCO₂e in transacted offset volume.

Source: Forest Trends’ Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

¹⁵ While the contractual terms of Sweden’s CER purchases are voluntarily more favorable than required for compliance, the tonnes will nonetheless be surrendered for compliance purposes and so are not included in this report’s findings.

¹⁶ <http://www.trust.org/item/20131009081950-gec9l/>

reductions occurred (i.e., “vintage”), project location, progress toward verifying emissions reductions, project size, and both supplier and buyer market positions, wants, and needs. Project types have infrequently experienced stable pricing over time, and price fluctuations throughout 2013 were no exception.

2013 survey respondents reported lower average prices across the market’s three most popular project types last year – REDD, wind energy installations, and clean cookstove distribution – as each sector grappled with the implications of growing supply. A/R, energy efficiency, fuel-switching, hydropower, and methane capture projects all experienced an increase in average prices in 2013, but at the expense of lower transaction volumes.

Last year the average price for REDD offsets fell 44% to \$4.2/tCO₂e, from \$7.4/tCO₂e in 2012 – reflecting the market’s perception of REDD offset oversupply from the growing number of projects capable of issuing more than 1 MtCO₂e annually. Even so, Figure 26 illustrates that less than a handful of suppliers were responsible for the 28% of transacted REDD offsets priced at less than \$3/tCO₂e. Another nine suppliers were behind 62% of REDD offset transactions priced at below \$6/tCO₂e. In contrast, the largest number of suppliers (30) reported transacting a far smaller volume of offsets at prices exceeding \$6/tCO₂e. Lower-priced REDD offset transactions were primarily reported from projects generating over half a million tonnes of emissions reductions annually.

Analysis of historical REDD offset transactions reveals that buyers are significantly responsive to changes in offset price. In the case of 2013, suppliers’ lower average prices directly influenced the project type’s sharp increase in demand. Conversely, clean cookstove project supporters were not at all responsive to falling prices for the development-oriented offsets which have typically benefitted from the perception of their scarcity and “luxury good” pricing. Cookstove project developers suggest that the growing number and scale of such projects signals their shift from luxury item to mainstream, where they were forced to compete with other high-volume contenders for voluntary demand.

Despite their attractive co-benefits, both clean cookstove distribution and forestry projects faced fierce competition from less expensive project types again in 2013. Even though the volume of offsets transacted from wind projects fell 9% from 2012, their

prices declined by 36% to \$2.1/tCO₂e, from an already low \$3.3/tCO₂e in 2012. In step with their diminished demand, large hydropower projects experienced an even more dramatic decline, seeing an average price drop of 78% to \$0.7/tCO₂e. Both project types were influenced by market perceptions that such offsets competed directly with historically low-priced CERs sourced from the same activities. In fact, CERs from these project types were not reported in this year’s survey in any significant volume. CERs that were transacted were typically sourced from more “charismatic” project types like clean cookstove distribution – but the perception of direct competition nonetheless incited new price lows that challenge project viability.

“Instead of helping the projects in meeting necessary profitability, current market price is eroding the value of renewable energy projects,” said Dipjay Sanchania, CLP Wind Farms India. “Prices below \$1/tCO₂e are defeating the very purpose of such mechanisms – improving profitability of greenhouse gas (GHG) abatement projects. Most of the investors have already stopped doing new verification to contain their losses and some are revamping their processes to reduce issuance cost of carbon credits in order to help their project survive for some more time.”

Across most project types, carbon asset and project developers also found it difficult to hold the line on prices because of competition from other developers undercutting them, sometimes due to cash flow issues that forced them to sell at less-than-ideal prices. At least one market participant expressed interest in the formation of a trade association that would hold its members responsible for maintaining a floor price that is more favorable to their business operations. But others doubt that such an association would have any impact.

“I think it’s impossible,” said Nick Marshall, Global Carbon Program Manager for Envirofit. “It sounds like a great idea....but there will always be an operator in a distressed position who just needs to offload and needs cash. They’re not going to abide by some edict.”

2.3 Project Location

In 2013, carbon projects located in 59 different countries on every continent (except Antarctica) successfully sold offsets on the voluntary market, attracting buyers hailing from 32 different countries. This section provides an overview of project location-

Figure 27: Transacted Volume and Average Price by Project Region, 2012 & 2013



Notes: Based on survey responses representing 62 MtCO₂e (2013) and 79 MtCO₂e (2012).

Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

based findings, while Chapter 5 presents detailed findings by region.

The CDM's marked presence in **Asia** was again apparent in 2013, when 21 MtCO₂e transacted were associated with Asian projects. Around 70% of these tonnes were generated by renewable energy projects and transacted at below-average prices (\$1.7/tCO₂e). Asian clean energy offsets remained a staple in most retailer portfolios.

Projects in India and China were the most common Asian offset sources, primarily due to their abundant stocks of inexpensive renewable energy offsets. Elsewhere in the region, buyers and their suppliers paid increasing attention to Asia's forestry and energy efficiency projects – driving market growth in Malaysia and Indonesia.

With seven Chinese pilot emissions trading systems (ETS) now active, interest in Chinese offset demand is high, but regulatory opacity regarding offset eligibility has led China's suppliers and buyers to take a wait-and-see approach. Meanwhile, Japan consolidated its voluntary standards – the J-VER and J-CDM – into the new J-Credit Scheme, while Korea continued to iron out the details of its proposed 2015 ETS. Thailand and Indonesia are exploring similarly voluntary ETS for late 2014 or 2015.

Meanwhile, **Latin America** gave Asia's traditional offset supply countries a run for their volume, seeing 19 MtCO₂e transacted from the region's projects. Through its 8 MtCO₂e commitment from KfW, Brazil's Acre state – along with sizable transactions from a few REDD+ projects in other locales – pushed Brazil over the top as the market's most popular project location in 2013. Peru, Mexico, and Argentina also experienced similar, though smaller, gains in volume. Regional average prices fell 39% to an average \$5/tCO₂e, reflecting lower prices for forest carbon offsets. Though Latin America's project developers do focus on forestry, renewable energy, household device distribution, and energy efficiency projects made modest gains.

Africa-based projects transacted a record 11 MtCO₂e in 2013 as Kenya retained its just-podium-shy place as the world's fourth-largest offset supplier, generating 4.8 MtCO₂e in transaction volume. The DRC, one of four countries to be accepted into the World Bank's Carbon Fund REDD pipeline in 2014, also made a strong showing on the voluntary market last year, with DRC-based projects transacting 1.4 MtCO₂e. Projects in Ghana, South Africa, Tanzania, and Uganda, among other countries, also contributed to the continent's growing market share, which is driven by buyer interest in projects with strong health or biodiversity benefits such as clean cookstove distribution, water purification, and REDD.

In **North America**, the US state of California launched its cap-and-trade program in January 2013. As such, the transaction of millions of offsets from forestry, livestock methane management, and domestic ozone-depleting substances (ODS) projects in North America – that were previously tracked as “voluntary” – migrated into the compliance market last year. Absent these transaction volumes, the region’s remaining purely voluntary projects transacted 5.1 MtCO₂e compared to 23 MtCO₂e reported in 2012.

The majority of **Europe’s** 2013 transactions were from wind, hydro, and landfill methane projects implemented in Turkey (3MtCO₂e). Because European Union (EU) members’ Kyoto Protocol commitments means that the majority of their emissions are already “capped” via the EU ETS, EU-based projects supplied the voluntary carbon market with only 0.5 MtCO₂e in 2013. However, project developers in the United Kingdom (UK) were active in the 2013 market, issuing more than 400,000 Pending Issuance Units representing forward sales under the UK’s Woodland Carbon Code (WCC). The Italians also developed A/R offsets for future sale to public-sector voluntary initiatives, as well as an Italian Forest Carbon Code to standardize voluntary methodologies.

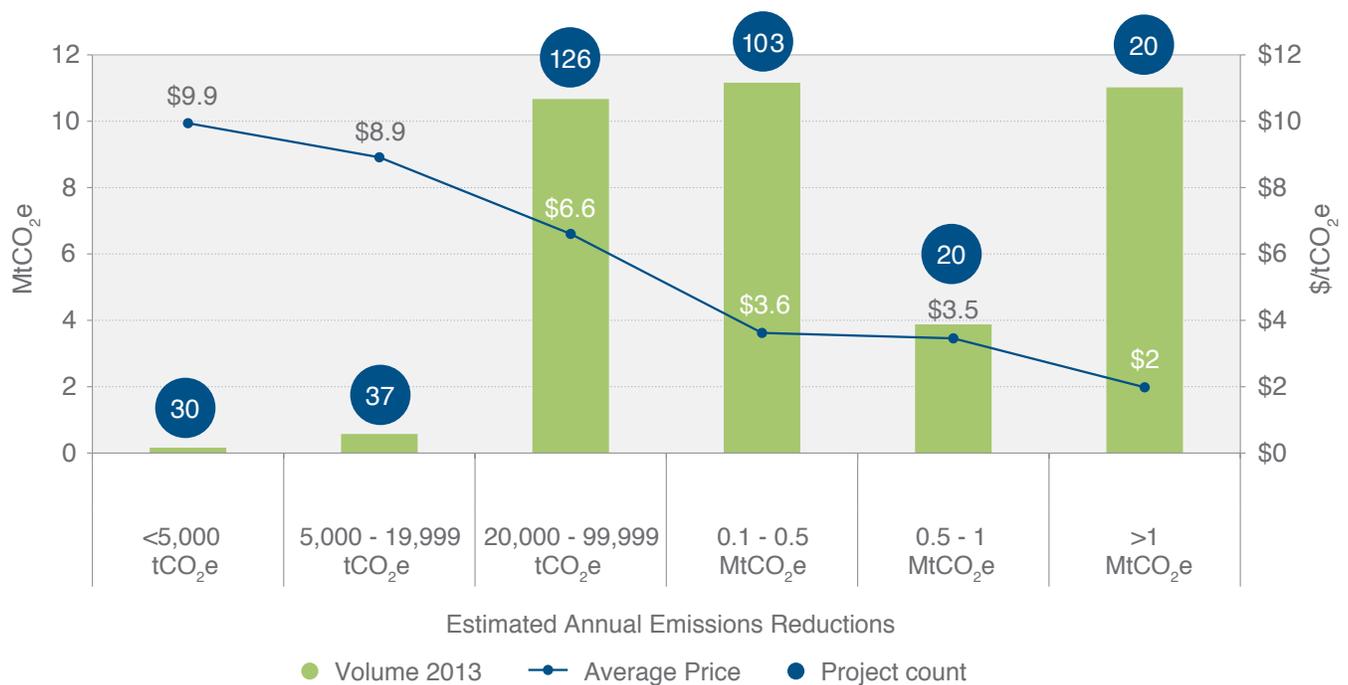
Projects in **Oceania** suffered a setback in 2013, as Australia’s new government vowed to repeal the country’s ETS that took effect in 2012. Australia’s offset market will be replaced with an “Emissions Reduction Fund,” which will serve as a reverse auction for the government to buy from competing sellers. As the details of future demand are being decided, uncertainty looms over Australian project developers and, accordingly, volume fell sharply by 94%. The Carbon Farming Initiative (CFI) may have also created a bottleneck for supply, as the process for early methodology approval took longer than expected, with the first approvals not coming through until 2013.

2.4 Project Size

The offset product market is just that – a market, which despite its niche status does exhibit predictable pricing patterns associated with economies of scale. Figure 28 illustrates that average price has an inverse relationship to project size, in that higher prices are typically associated with small- to micro-scale projects, while larger projects report lower prices.

This finding plays out similarly in every report year and speaks not only to the efficiencies associated with

Figure 28: Transacted Volume, Average Price, and Project Count by Project Size, 2013



Notes: Based on survey responses representing 40 MtCO₂e transacted.

Source: Forest Trends’ Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

larger-scale activities, but also potentially to the higher prices paid by buyers seeking to secure a place as a project's sole customer or otherwise closely support a project that is more uniquely "theirs." Consequently,

projects generating less than 0.1 MtCO₂e/year in emissions reductions were collectively worth three times as much (\$70.5 million) as the combined value of projects generating over 1 MtCO₂e/year (\$22 million).

3. Market Infrastructure: Standards and Registries

3.1 Third-Party Offset Project Standards and Certifications

The voluntary carbon market is a laboratory for innovation and experimentation, often undertaken in the quest to inform – and eventually supply – emerging carbon policies and regulations. Voluntary project certification programs underlie several of the dozens of national and sub-national programs that are surfacing independent of a global climate agreement and market. Beyond meeting the needs of this growing cadre of domestic programs, in 2013 voluntary standards also strengthened their response to purely voluntary buyer demands for offset projects with verifiable

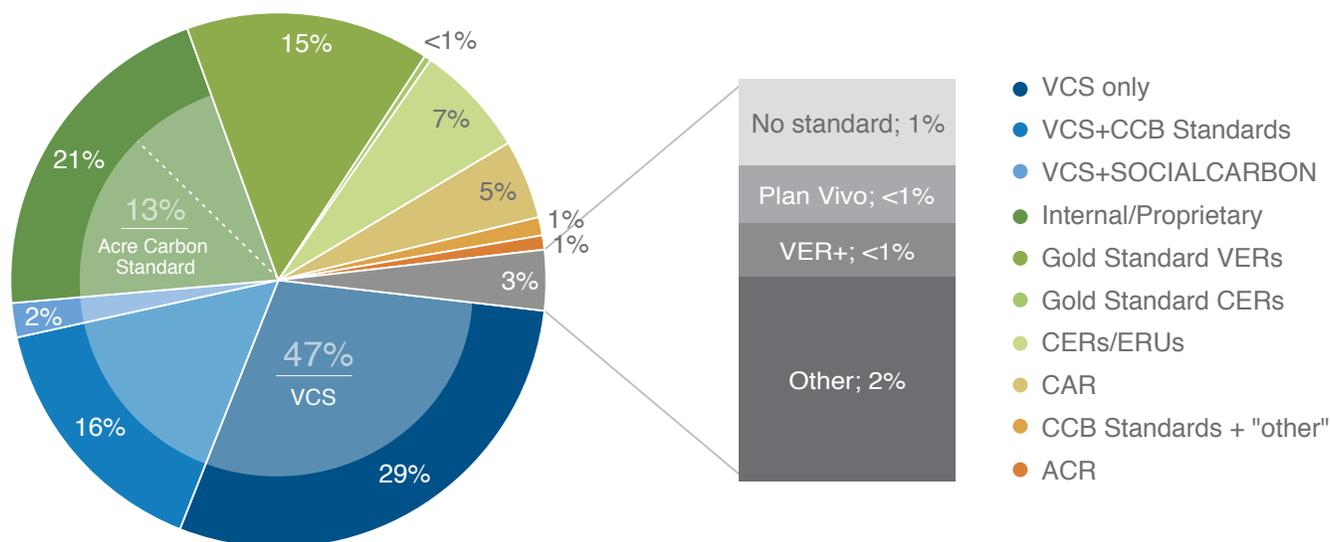
environmental and social contributions by improving and streamlining their validation of these benefits.

Third-party offset standards offer methodologies, quality control, and registry infrastructure to monitor, report, and verify emissions reductions that inform the development and quality of emissions reductions projects. Last year, standards guided more sophisticated and new approaches to project implementation in response to the need to finance emissions reductions from a myriad of sectors and ecosystems. They also set the stage for new project types and methodologies that are now beginning to make their debut in compliance carbon markets.

KEY FINDINGS

- In 2013, the Verified Carbon Standard (VCS) held onto its top spot among third-party standards. A full 28.9 MtCO₂e or 47% of 2013's total volume was transacted from projects at various stages of development with a VCS methodology, compared to 42.9 MtCO₂e or 61% of the market in 2012.
- More than a third of transacted VCS tonnes additionally achieved certification to the Climate, Community and Biodiversity (CCB) Standards (9.6 MtCO₂e) or the SOCIALCARBON standard (1.3 MtCO₂e) as buyers continued to show interest in offsets with certified non-carbon benefits. Projects utilizing these non-carbon certifications reported slightly higher average prices than VCS-only offsets.
- While previous years saw consolidation around a few key independent, peer-reviewed standards, more than one fifth of transacted offsets (12.8 MtCO₂e) utilized an internal/proprietary standard in 2013. At least 8 MtCO₂e in this category was associated with the Acre Carbon Standard, a “stand-in” standard of sorts through which Acre delivered early tonnes to KfW while pursuing the jurisdiction's validation to the VCS Jurisdictional Nested REDD (JNR) standard.
- Projects adhering to the Gold Standard saw 9.3 MtCO₂e transacted, just 2% less volume than last year. The Gold Standard's average price remained higher than the market's overall average (\$8.5/tCO₂e versus \$4.9/tCO₂e), but was down 9% from 2012's \$11.2/tCO₂e.
- Last year 35.4 MtCO₂e, or 84% of all transacted offsets associated with a project stage in this survey, were already issued at the time of sale. This number is up from 43% last year, speaking to the growing volume of available supply of issued offsets from projects that were “fully cooked” in 2013.
- 94% of all offsets issued in 2013 were housed on a registry hosted by Markit Environmental Registry (42 MtCO₂e issued in 2013) or APX (23.4 MtCO₂e issued in 2013). Overall, registries reported a 7% increase in issuances last year and retirements skyrocketed – of the 119 MtCO₂e that have ever been retired on a registry, 53 MtCO₂e (44%) were retired last year.

Figure 29: Market Share of Transacted Volume for Popular Independent Third-Party Standards and Certifications (% Share)



Notes: Based on responses representing 60 MtCO₂e in transacted offset volume.

Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

Standards also began coordinating with land-area and commodity certification programs, taking a “landscape approach” to emissions reductions that ideally would meet the needs of businesses concerned about climate change and its reverberations through product supply chains. And as those same impacts are increasingly realized by communities, standards are intensifying their focus on project types such as wetland restoration that provide adaptation benefits alongside carbon sequestration.

Five prominent trends – some new, others ongoing – are highlighted in this section.

Redefining and aligning with compliance markets

In 2013, the voluntary carbon markets continued to serve as a testing ground for third-party standards to be adapted by and adopted into emerging compliance markets. As seen throughout this report, the most noteworthy – and notably advanced – of these markets is in California, where regulators continue to draw on methodologies, registry infrastructure, and expertise developed under the Climate Action Reserve (CAR), American Carbon Registry (ACR), and VCS to support the state's compliance offset program.

Far south of the Golden State, Costa Rica President Laura Chinchilla signed a decree in fall 2013 creating a national voluntary carbon market – a first for a developing nation. Under the Costa Rican Voluntary Domestic Carbon Market domestic companies can become carbon neutral by purchasing offsets from domestic VCS or Gold Standard projects, or Costa Rican Compensation Units (UCCs) generated from domestic reforestation and clean energy projects. Costa Rica opened its own voluntary carbon exchange, BanCO₂ and expects the platform to transact 16 MtCO₂e over eight years.

South Africa also plans to accept offsets from the VCS as well as The Gold Standard in the market accompanying its carbon tax, set to take effect in 2016. Meanwhile, Switzerland acknowledged CERs additionally certified to The Gold Standard as automatically compliant with its quality criteria screens for inclusion in the Swiss ETS. The policy allows companies to meet up to 8% of their compliance obligations through the use of the international offsets. While The Gold Standard VERs cannot count toward emission reduction commitments, several Gold Standard CDM projects straddled both markets in 2013, and project developers cite this decision as a strong signal to other governments regarding the program's independent strengths.

Voluntary standards facilitate REDD scale-up

Newly emerging frameworks for jurisdictional approaches to REDD accounting – including both regional and project-level emissions reductions – will also facilitate a transition from voluntary to compliance market requirements as avoided deforestation is incorporated into government strategies. The VCS is leading the way with its Jurisdictional and Nested REDD+ framework, launched in fall 2013 after an extensive consultation period.

Also in 2013, VCS received a 3-year, \$1.4 million grant from the Norwegian Agency for Development Cooperation/ Norwegian International Climate and Forest Initiative to develop and pilot integrated JNR accounting and verification frameworks at the national level in Costa Rica and at the sub-national levels in Acre, Brazil; San Martín and Madre de Dios, Peru; and Mai Ndombe Province in the DRC. Including these localities, VCS is currently working with more than a dozen national and state-level governments to apply the JNR framework. These include, but are not limited to Ecuador, Chile, Guatemala, Ghana, Madagascar, Vietnam, Laos, and Cambodia. Representatives from some of these countries said they also hope to use a non-carbon benefits standard such as the Climate, Community, and Biodiversity Association's (CCBA's) REDD+ Social and Environmental Standards, which is specifically designed for jurisdictional programs.

The Brazilian State of Acre manages the most mature jurisdictional program to date. Acre has been using JNR as the core carbon framework to quantify the emission reductions its REDD+ program generates, including those reductions governed by Acre's agreement with KfW.¹⁷ However, since Acre has not yet completed validation and registration under JNR, the emission reduction "units" that are issued and retired for KfW in order to demonstrate Acre's climate performance are accounted for under the "Acre Carbon Standard" on Markit Environmental Registry – and is categorized as such in this report.¹⁸ Acre is starting the validation process with JNR and expects to verify the state's emission reductions and start issuing Verified Carbon Units (VCUs) by early 2015.

Bolstering "beyond carbon" benefits

In reaction to sustained demand for carbon offsets with certifiable contributions that go "above and beyond" their climate impact, last year standards worked more collaboratively to facilitate the process of validating non-carbon benefits alongside emissions reductions. For instance, the fifth version of the SOCIALCARBON standard released in 2013 requires a 50% or more overlap in timing between monitoring periods with VCS for projects aiming for dual certification; the two standards created joint templates for project registration this year.

Almost one year after announcing its new streamlined approach to dual certification with the VCS, the CCBA launched the third version of its CCB Standards in December 2013. The new edition strengthens CCB Standards requirements for achieving "Gold Level" certification by which forest carbon projects must identify explicit ways in which the project helps communities or biodiversity enhance their resilience to climate impacts ("adaptation"). The CCBA's Joanna Durbin says the Gold Level sets a new bar for community- and indigenous-led projects to differentiate their offsets from those associated with the 14 projects currently achieving Gold Level certification under the CCB Standards' second edition.¹⁹ Of the 17 projects that have verified emissions reductions and delivery of co-benefits under the CCB Standards' second version, five monitored and verified climate adaptation benefits, and issued and transacted more than 1.8 MtCO₂e. As of November 2014, VCS will assume the day-to-day management of the CCB Standards, a move that both standards anticipate will facilitate dual verifications of both emissions reductions and co-benefits.

A few emerging non-carbon programs prioritize specific groups that might otherwise get the short end of the stick. The W+ Standard, developed by Women Organizing for Change in Agriculture and Natural Resources Management, supports carbon offset projects that empower and provide carbon

¹⁷ See also Section 2.1 for more information about Acre's and KfW's 2012-2013 agreement resulting from Germany's REDD Early Movers Programme.

¹⁸ This report series tracks the parameters of offset transactions and projects at the point of contract or other form of agreement. Because the date at which Acre will achieve validation and verification of its forest carbon emissions reductions under VCS JNR is unknown, this report tracks these tonnes under their provisional moniker.

¹⁹ Last accessed July 2014: [https://s3.amazonaws.com/CCBA/Upload/ccb_standards_second_edition_december_2008+\(1\).pdf](https://s3.amazonaws.com/CCBA/Upload/ccb_standards_second_edition_december_2008+(1).pdf)

revenue directly to women and is in the beginning stages of developing its first pilot project in Nepal. In early 2014, the Aboriginal Carbon Fund in Australia held a workshop to discuss a Fair Carbon standard that would include “fair minimum prices” for offsets as well as co-benefits and encourage corporations to enter into long-term (five- to ten-year) contracts with carbon farmers to provide market stability.

Standards in the driver’s seat: linking agricultural and forest landscapes

Last year, standards’ actions indicated a concerted shift towards a “landscape approach” to emissions reductions in which land conversion is viewed in the context of its drivers. For The Gold Standard, 2013 marked its first full year supporting new forest carbon project development after its acquisition of forest-centric CarbonFix in late 2012²⁰ and its first year of collaboration with both the Forest Stewardship Council (FSC) and Fairtrade consumer label. Standard representatives say that streamlining these certifications for forest carbon emissions reductions, community benefits, and commodities will ultimately facilitate a landscape perspective and that 2013 had been a “productive year” aligning definitions and procedures in pursuit of this aim.

The landscape approach also means seeing forests within the context of other ecosystems. A VCS pilot project developed with a methodology for avoided conversion of grasslands in the Taita Hills of Kenya received a vote of confidence in early 2014 when the Althelia Climate Fund directed \$10 million to its implementation. Project developer Wildlife Works developed the project, and, according to the company’s founder and CEO Mike Korchinsky, the inclusion of grasslands in REDD+ makes sense given their potentially high carbon storage as well as the fact that savannahs are interspersed with forests on the ground and face the same threats of conversion.

“One of the reasons why there are some land units in the area that were not part of the REDD project [before] was because they did not meet the forest definition,” said Korchinsky. “Those community landowners that see their neighbors benefiting from carbon finance because their neighbors’ land happens to have forests are wondering why they can’t benefit from conserving their savannah ecosystems.”

Taking the blue line to climate resilience

Methodologies that reduce GHG emissions while simultaneously building resilience to climate change impacts are gaining popularity among standards and project developers that appreciate the direct benefits to communities and businesses with exposure to climate risks. As a result, “blue carbon” methodologies that address restoration of coastal ecosystems are taking the stage in step with a growing understanding of the role that wetlands play in mitigating the effects of rising sea levels and more frequent and intense storms.

ACR’s deltaic wetland methodology, developed in 2012, made its debut last year through a pilot project proximate to New Orleans, Louisiana. Entergy, the Gulf Coast utility that funded the methodology’s development, sees blue carbon projects such as these as a win-win: restoring wetland protects the company’s coastal infrastructure, and the carbon offsets can also be purchased against its emissions reductions goals. ACR is now developing a similar protocol for California that it hopes will be adopted by the state’s regulators for use in the compliance program.

Additionally, in early 2014, VCS approved its own methodology for wetland restoration in the US, working closely with the Louisiana Coastal Protection and Restoration Authority, which employs an activity method to address the question of additionality, lowering initial transaction costs. While it will be first applied along the US Gulf Coast, the methodology is applicable throughout the United States and could potentially be adapted to regions outside of the US.

3.2 Independent Third-Party Standards Usage in 2013

Buoyed by the popularity of REDD and wind energy offsets, VCS held on to its top spot among third-party standards guiding project development and emissions reduction verification. A full 28.9 MtCO₂e of 2013’s total volume was transacted from projects at some stage of project development under a VCS methodology. However, VCS’s market share dropped slightly in 2013 to 47%, down from 61% in 2012 when suppliers transacted 42.9 MtCO₂e. On the other hand, 2013 saw a larger volume of offsets associated with unknown or proprietary standards,

²⁰ The Gold Standard released its Gold Standard Land Use and Forests Framework, including A/R requirements in mid-2013: [http://www.goldstandard.org/luf_ar-requirementsdecember_2008+\(1\).pdf](http://www.goldstandard.org/luf_ar-requirementsdecember_2008+(1).pdf)

or utilizing a recognized standard like VCS to guide project development but not necessarily seeking validation or offset verification.

While previous years saw consolidation around a few voluntary standards, with little space for internal or proprietary methodologies, more than one fifth of transacted offsets (12.8 MtCO₂e) utilized an internal standard in 2013. As described elsewhere in this report chapter, at least 8 MtCO₂e in this category was associated with the Acre Carbon Standard, a “stand-in” standard of sorts that Acre utilized to deliver early tonnes to KfW while pursuing the jurisdiction’s validation to the VCS JNR. Other proprietary standards include the Natural Forest Standard, the Rainforest Standard, PrimaKlima approach, and insular carbon markets such as Italy’s CARBOMARK. A few of these programs belied this category’s remaining 4.8 MtCO₂e (subtracting Acre).

Most often, internal, proprietary, or otherwise unpublished standards are designed to be used in the context of a specific place. For instance, the Peru Carbon Fund (PCF) Standard, which is specifically applicable to the Andean country, emerged in 2013 with the aim of incentivizing reforestation of native trees on previously deforested land. The standard is distinct in that it costs nothing for farmers to apply for certification, and harvesting is allowed for purposes such as construction (which would continue to store the carbon).

“We believe it’s impossible to target a problem as large as deforestation in Peru with a standard that was not made specifically for the Peruvian reality,” said Alessandro Riva, Executive Director of PCF. “Additionally, we believe that the extremely high costs of implementing international standards in the Peruvian jungle are the main reason why they haven’t succeeded in turning around this dramatic situation.”

The Gold Standard’s total transacted volume fell just slightly (down 2%), seeing 9.3 MtCO₂e of both Gold Standard VERs and CERs transacted. Just over 1% or 0.1 MtCO₂e of Gold Standard market share came from eight offset transactions from A/R projects in its first year offering forest and land-use methodologies. The standard’s foundational focus on development-oriented carbon finance was reflected in its market make-up, as two-thirds of transacted Gold Standard offsets came from either clean cookstove distribution (3.3 MtCO₂e) or water purification device distribution (2.2 MtCO₂e) in 2013.

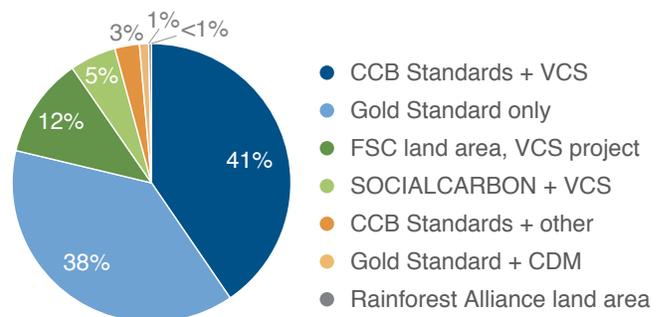
As the first commitment period of the Kyoto Protocol came to a close at the end of 2012 and uncertainty over the role of the CDM in a future climate agreement ran high, some CDM project developers looked to voluntary buyers to offload their CERs. This situation describes 7% of all transacted offsets in 2013. Of the 4.4 MtCO₂e of CERs transacted, 6% were additionally certified to The Gold Standard.

The **Climate Action Reserve’s** (CAR) voluntary market share and transaction volumes were halved last year as the standard turned its attention to California’s compliance market, newly functioning as an approved Offset Project Registry (OPR). OPRs are empowered by the state’s regulators to help facilitate reporting and verification from projects developed under the state’s compliance protocols, although the registry offsets they issue cannot be used for compliance without first being converted for use in the cap-and-trade program.

The **American Carbon Registry (ACR)**, also an OPR, nevertheless grew its voluntary market activity by 27% for the first time in several years, representing 0.5 MtCO₂e or 1% market share – mainly transacting offsets from project types such as landfill methane and energy efficiency that are not eligible to generate offsets for California’s compliance market.

While offsets utilizing CCX methodologies made a strong, surprise showing in 2012, the **Chicago Climate Exchange** held only one trading day in 2013 as the platform that arose in anticipation of

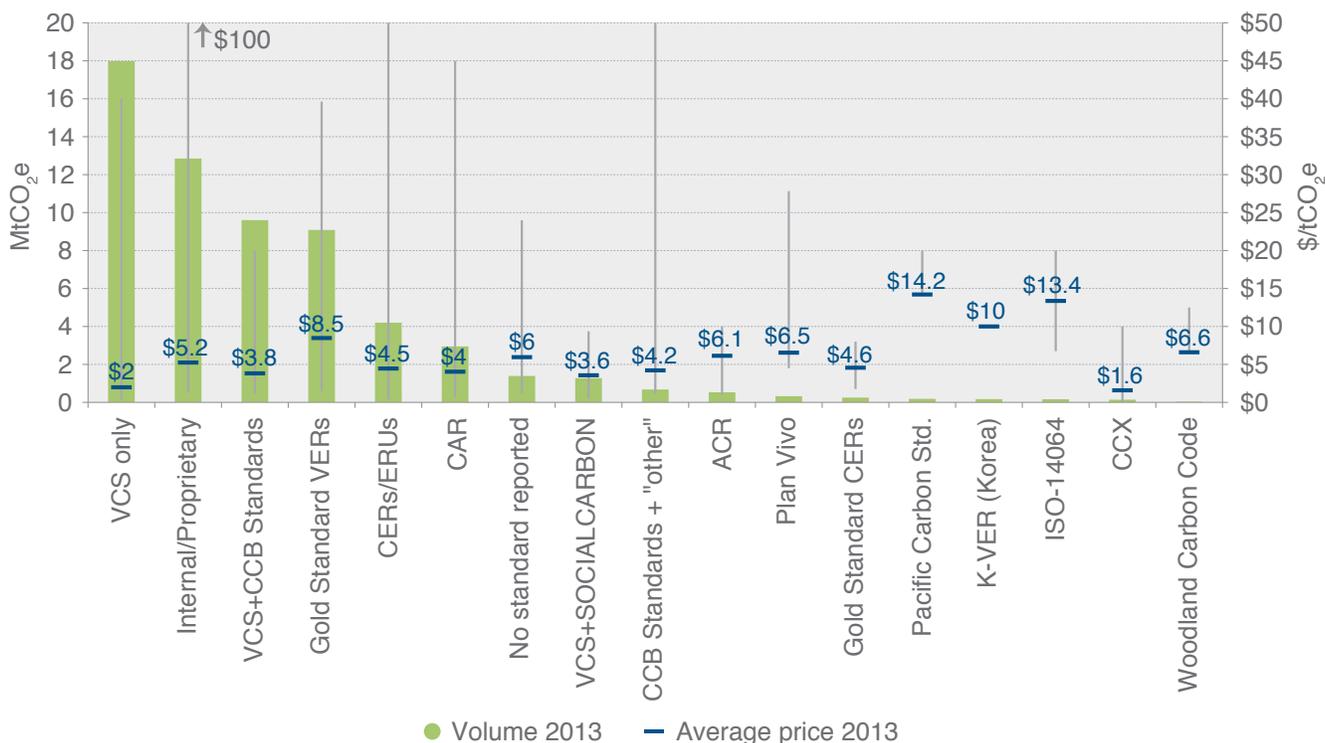
Figure 30: Market Share of Transacted Volume for Co-benefits and Land Area Certifications (% Share)



Notes: Based on responses representing 24 MtCO₂e in transacted offset volume.

Source: Forest Trends’ Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

Figure 31: Transacted Volume and Average Price by Project Standard, 2013



Notes: Based on responses representing 60 MtCO₂e in transacted offset volume.

Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

nationwide US cap-and-trade saw minimal activity. Australia's CFI also fell off the radar as the new government's commitment to abolish the carbon tax eroded demand in the voluntary market.

3.3 Co-benefits and Project Area Certifications

Many voluntary buyers are just as interested in a project's social and environmental impact "beyond carbon" as they are in mitigating climate change – in some cases a tonne of CO₂e is simply a useful unit for measuring and verifying the performance of a project that promotes multiple benefits.

"The world is more than carbon reductions," said Pieter van Midwood, Director of Business Development for Land Use and Forests at The Gold Standard, "What we try to do is make a payment for carbon reductions in fact a payment for sustainable development."

Some carbon standards, including The Gold Standard and Plan Vivo, wrap these so-called "co-benefits" into their standard requirements, adding that any verified emissions reductions also meet

social and environmental criteria. These standards are thus included in both carbon accounting and "other certifications" categories (Figures 29 and 30), whereas purely carbon-accounting standards such as VCS and ACR are featured only in Figure 29.

VCS and other carbon-only standards do enable project developers to certify non-carbon benefits, and many do. More than a third of VCS tonnes from forestry carbon projects adhered to the CCB Standards (9.6 MtCO₂e) or the SOCIALCARBON standard (1.3 MtCO₂e). However, slipping prices are of acute concern to projects that spend the extra time and money to certify co-benefits. CCB reports that while in 2011 100% of its verified tonnes were issued (meaning they had found a buyer), that percentage has fallen over the last two years. Projects developed under both VCS and CCB indeed saw a 23% drop in transacted volumes in 2013.

"What projects are telling us is that it's getting harder and harder to find buyers for verified emissions reductions and to get a good price," said Joanna Durbin, CCBA Director. "It's very painful to see so many good projects that have gotten to the stage of actually implementing

activities and showing the high level of multiple benefits that they can deliver but now finding they are not getting the level of revenue that they had anticipated, and that is needed to ramp up implementation, because of the downturn in the demand.”

In addition to non-carbon benefits standards associated with emissions reductions, this report survey also tracks project area and agricultural or forest commodity certifications applied to land areas in which forest carbon projects are also based. In particular, these include the Fair Trade, Rainforest Alliance, and FSC labels that consumers recognize as representing just labor practices and sound product sourcing. In 2013, 2.8 MtCO₂e of VCS offsets were sourced from project areas with one of these certifications.

With 2013 being the first full year of The Gold Standard’s collaboration with FSC and Fair Trade, no Gold Standard land-use projects that transacted

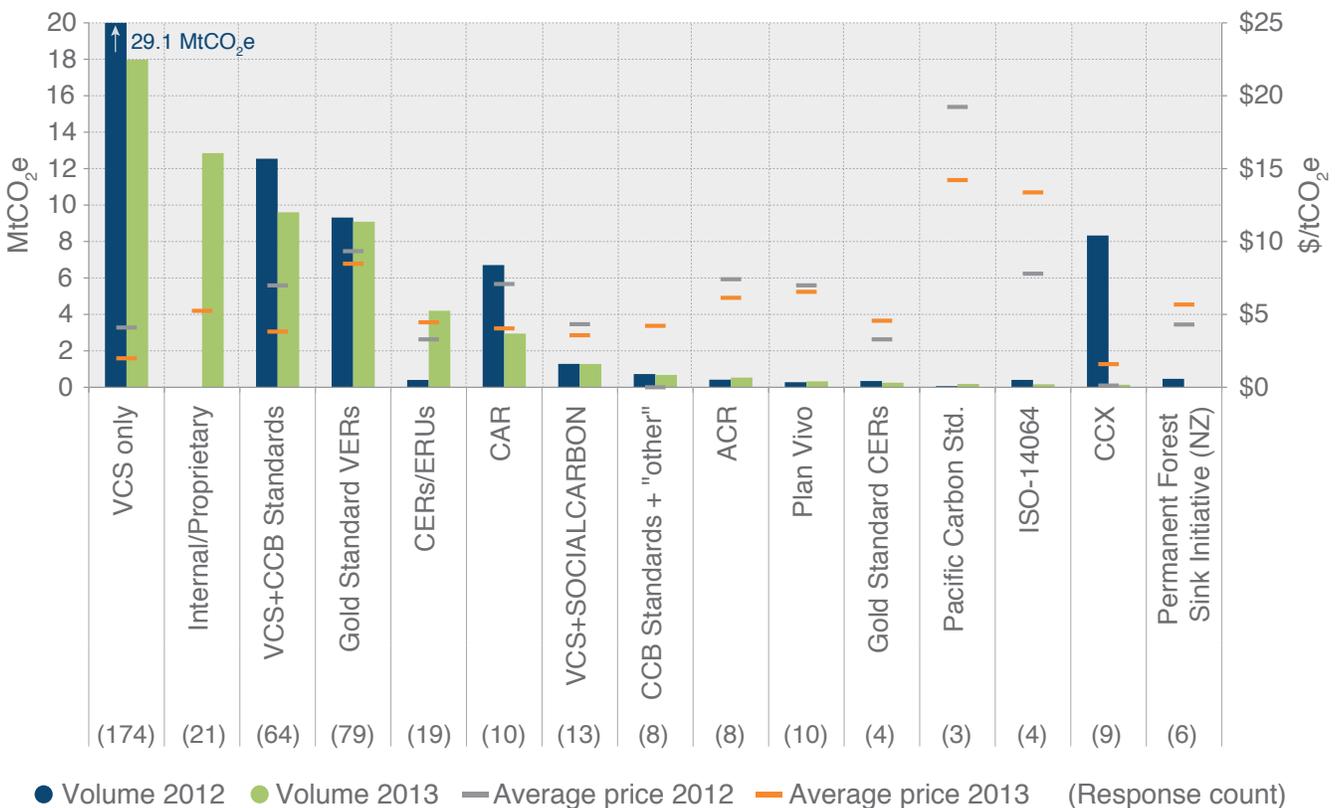
offsets reported being based in land areas associated with other non-carbon certifications.

3.4 Offset Prices by Standard Utilized

In line with broader market trends, average offset prices fell across nearly all standards in 2013, when prices ranged from as little as \$0.1/tCO₂e for offsets transacted from CCX projects to more than \$100/tCO₂e for offsets following an internal/proprietary standard.

Among the leading standards, VCS experienced the most dramatic average price decrease, down by 46% to an average of \$2.8/tCO₂e, with some tonnes transacted at less than a nickel. This includes projects reporting additional tagged non-carbon certifications; offsets from projects certified only to the VCS averaged \$2/tCO₂e. Due to the standard’s sizable market share, however, this average varies highly by project type or category. For example, VCS methane capture and energy efficiency projects garnered close-to-average

Figure 32: Change in Transacted Volume and Average Price by Project Standard, 2012-2013



Notes: Based on responses representing 60 MtCO₂e in transacted offset volume.

Source: Forest Trends’ Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

prices from \$4.6/tCO₂e to \$4.9/tCO₂e, respectively, while renewable energy projects such as wind and hydro were priced at an average \$1.5/tCO₂e.

REDD offsets, which made up 9.6 MtCO₂e of VCS's transacted volume, sold at an average of \$3.2/tCO₂e – above many other project types, but still below market-wide average pricing. The average price for VCS REDD offsets was significantly pulled down by four major transactions capturing 58% share of VCS REDD+ market share that occurred at below \$3/tCO₂e. The largest number of VCS REDD+ offset transactions (27) reported prices between \$3/tCO₂e and \$12/tCO₂e (3.6 MtCO₂e), of which 2.3 MtCO₂e were transacted at between \$3/tCO₂e and \$6/tCO₂e.

Non-carbon certifications CCB and SOCIALCARBON also tended to add value to VCS offsets. While the average price for all VCS REDD+ offsets was an average of \$3.2/tCO₂e in 2013, those that added the CCB verification (or were in the process of doing so) sold offsets at an average of \$3.8/tCO₂e. VCS + SOCIALCARBON offsets averaged \$3.6/tCO₂e. It is important to note that these prices were more than a dollar below market-wide average pricing and that prices for VCS+CCB offsets were almost halved from an average of \$7/tCO₂e in 2012.

Gold Standard offset prices did not decrease as dramatically but fell nonetheless, averaging \$8.5/tCO₂e (down 9% from 2012). Focused on sustainable

development and integrated non-carbon-benefits, offsets certified to The Gold Standard have typically transacted at above-average prices, and this year was no different. Within this category prices were also highly variable, seeing as much as \$9.8/tCO₂e for offsets from energy efficiency to \$9/tCO₂e for household device distribution – to \$7/tCO₂e for both renewable energy projects and newly christened forestry activities.

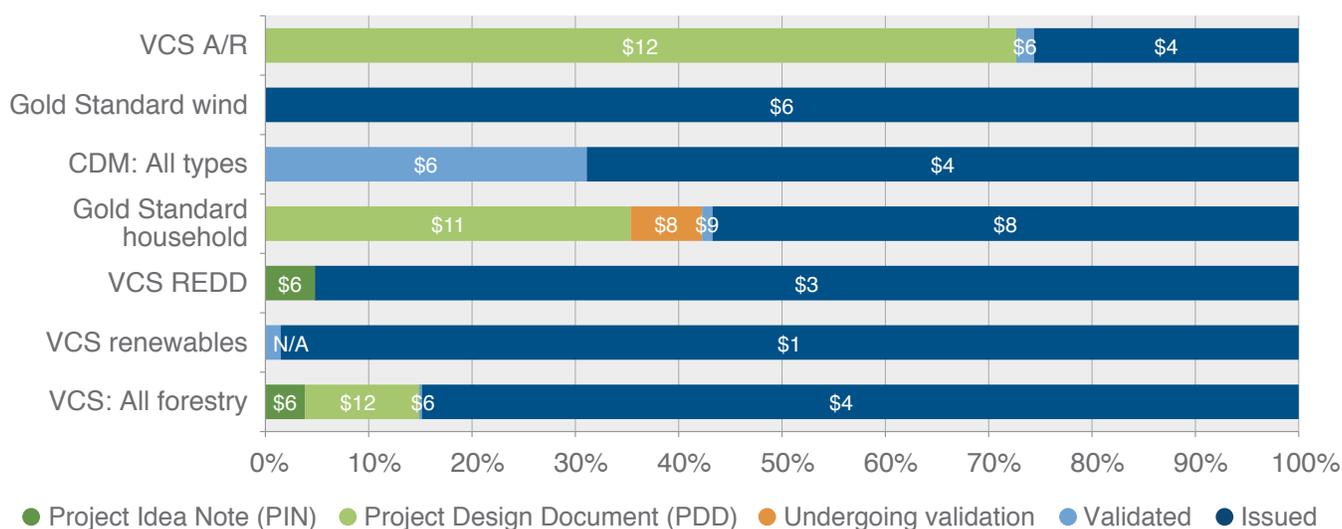
The two approved California compliance market OPRs, ACR and CAR, saw pricing for voluntary offsets that was above-average for the voluntary market (an average of \$6.1/tCO₂e and \$4/tCO₂e, respectively) but below what projects can potentially receive for offsets sold into the state's compliance market, where buyers are simply looking for offsets priced below the \$11+/tCO₂e allowances that they would otherwise need to buy to meet compliance.

3.5 Offset Prices by Standard and Project Stage

Another factor that influences price, alongside standard and type, is the stage the project had achieved at the time of transaction. These three variables are examined together in Figure 33 in order to understand how the stage of project development – from Project Idea Note (PIN) through offset issuance – influences the prices that sellers and buyers ultimately negotiate.

In 2013, 35.4 MtCO₂e – or 84% of all transacted offsets associated with a project stage in this survey – were

Figure 33: Market Share and Average Price by Project Stage, 2013



Notes: Based on responses representing 60 MtCO₂e in transacted offset volume.

Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

already issued at the time of sale. This number is up from 43% last year, speaking to the growing volume of available supply of issued offsets from projects that were “fully cooked” in 2013. VCS afforestation/ reforestation and Gold Standard household device distribution were the only two project types that saw significant transacted volumes at the Project Design Document (PDD) stage, at 1.3 MtCO₂e and 1.5 MtCO₂e respectively.

These early-stage transactions are likely a result of both project developers’ need for upfront finance and buyers’ willingness to provide early funding to catalyze project activities that deliver important co-benefits. Buyers that are involved in project development and want to talk about a project’s “story” from its outset may also pay higher prices for forward contracts. Indeed, where price information is available, this year’s data shows that offsets transacted before issuance often fetched higher prices. As seen in Figure X, early-stage activities garnered higher average prices than their fully operational counterparts supplying issued offsets.

3.6 Offset Project Registries: Tracking the Trades

While standards guide the development and monitoring of offset projects, registries provide the critical market infrastructure for tracking offset issuance and retirement, and connecting buyers and sellers. Registries are clearinghouses of information for project documentation and track environmental credits throughout their lifecycle. Increasingly, a registry account also serves as a rite of passage for offset suppliers and buyers, indicating that their organization cleared a registry’s client approval process.

Overall, registries reported a 7% increase in issuances from last year, though activity varied significantly across registries. A total of 54 MtCO₂e were issued in 2013, the majority of them (42 MtCO₂e) on the Markit Registry. Markit’s activities were boosted by the fact that they added three standards to their repertoire in 2013 – the Gold Standard (for their VERs), the UK’s WCC, and the Acre Carbon Standard. APX issuances of voluntary offsets were 23.4 MtCO₂e in 2013 – 25% lower compared to 2012, primarily due to a general decline in VCU issuances.

Offset retirement, on the other hand, skyrocketed in 2013, reflective of the ever-growing supply of issued offsets that are eligible for retirement. Of the 119 MtCO₂e that have ever been retired on a registry, 44%

(53 MtCO₂e) were retired last year. This represents 13% of all tonnes that have ever been transacted, as tracked in this report series. These tonnes can no longer be traded and their permanent lockdown on a registry is one measure of the ultimate environmental impact of the voluntary carbon market.

In addition to continued corporate interest in the use of offset-inclusive carbon management, the steady increase in registry-tracked retirements is also a sign of a maturing market, according to Kathy Benini, Managing Director at Markit. “A few years ago, when the registry system was established, the use of registries was not well understood. Today, market participants would not transfer or retire credits outside of the registry system,” she said. “This highlights the increased understanding and importance of registry infrastructure.”

Registries, too, continued to see an interest in projects’ environmental, social, and other non-carbon benefits and continue to navigate the best way to support that demand. More than 12% of VCS offsets issued on Markit in 2013 were tagged with additional SOCIALCARBON verification, while 1% of VCS issuances included CCB.

Finally, though many transactions are a result of long-standing relationships, registries are increasingly becoming a meeting place for buyers and sellers. For instance, Markit enhanced its Request for Information platform last year to include the ability for buyers to list what they are interested in purchasing in addition to allowing offers from project developers and retailers.

Infrastructure for jurisdictions

The major registries initially developed their carbon platforms to handle issuances and retirements at the project level. But as domestic carbon programs launch – and as REDD projects in particular begin to “nest” into jurisdictional programs – registries are beginning to expand their repertoires.

Markit began hosting the jurisdictional Acre Carbon Standard in 2013 as a placeholder of sorts for VCS JNR activities and issuance and is working to build the infrastructure needed to support jurisdictional REDD programs. One of their enhancements enables monitoring of performance-based milestones that aren’t necessarily tied to carbon offsets. The Markit Registry features a dashboard through which government authorities and others can create a set of finance-tied goals or outcomes for jurisdictional programs and receive “alerts” with the

next steps needed to be taken – and on what timeline – to release that funding. The biodiversity markets, which have also used milestones in payment-for-performance mechanisms, serve as a model.

This is one example of how experience in other types of markets that already function at a jurisdictional level – whether municipal, state-wide, provincial, or national – has helped registries to build out their carbon infrastructure.

“Jurisdictional approaches such as JNR have a lot of similarities with what we have developed for jurisdictional Renewable Portfolio Standard programs for renewable energy credits (RECs),” said APX Inc.’s Lars Kvale of the US’ state-based renewable energy portfolio requirements serviced by APX. “Those registries support 30 different jurisdictional programs, and we’ve taken experience from the REC side and carried it over to the carbon side.”

4. Details of the Deals: Buyers and Contract Structures

An ever-changing cast of motivations drive companies, governments, non-governmental organizations (NGOs), and individuals to offset their carbon emissions. Some organizations invest in projects that not only have environmental advantages, but also contribute local social and health benefits to developing country communities – achieving multi-faceted outcomes that may help “sell” the project to internal decision-makers, shareholders, media, and other stakeholders.

Other offset buyers direct their corporate social responsibility (CSR) dollars toward projects that are

implemented close to home to mitigate the threats that rising seas and other effects of a changing climate pose to their business operations or local communities. In 2013, a record proportion of offset buyers were driven by a purely voluntary desire to “take action against climate change,” as opposed to simply preparing for future regulations. Without many strong compliance signals, buyers who remain committed to voluntary offsetting describe both challenges and opportunities to expanding project activity and sustaining buyer interest.

KEY FINDINGS

- In 2013, the private sector was behind 74% of offset purchases. Here, multinational corporations in North America and Europe transacted the largest offset volume of any business category (20 MtCO₂e). Close behind these organizations were national public agencies committing to pay projects to deliver at least 9.5 MtCO₂e.
- Last year, offset retailers were the voluntary market's most active offset buyer. Overall, retailers bought or supplied 33.3 MtCO₂e valued at \$192 million in 2013 – roughly 44% of all transacted offsets and half of market value.
- Among offset end users in the private sector, energy utilities topped the chart, transacting 5 MtCO₂e in 2013. Companies in the finance and insurance sectors were next in line, transacting 4.4 MtCO₂e. The transportation sector – particularly aviation – was behind another 3 MtCO₂e of transacted offsets.
- Only 24% of transacted offsets were purchased by new buyers. Excluding the Acre deal, nine out of ten offsets were transacted to existing buyers. Much of the offset volume transacted by new buyers was from forestry projects and sold at an average price of \$3.7/tCO₂e – well below prices paid by existing buyers.
- Corporate voluntary buyers responded to growing concerns about global warming – as seen last year when the “pursuit of a climate-driven mission or to combat climate change” became the top motivation for carbon offsetting. While CSR remains among buyers' top three motivations for offsetting, the volume of offsets that they transacted for CSR purposes declined by more than half to about 6.9 MtCO₂e last year.
- This report's survey gathered responses from suppliers and buyers in 57 countries and projects based in a record 60 countries. European companies remained the most prolific offset buyers, purchasing 28 MtCO₂e in 2013 – which was down significantly from 2012's 43 MtCO₂e as Europe continued to contend with the lingering effects of a financial recession.

4.1 Who Buys Offsets?

Private sector buyers were behind three-quarters of offset purchases in 2013. Within this category, multinational corporations in Europe and North America purchased the largest volume at more than 20 MtCO₂e last year, although this represented a reduction of about 7 MtCO₂e from the previous year as persistent economic challenges put a damper on CSR-related buying by European corporates.

The public sector's share of the market jumped to 21% in 2013, or more than 10 MtCO₂e transacted, on the strength of the 8 MtCO₂e agreement between German development bank KfW and the Brazilian state of Acre. While market participants welcome major public sector payments for project performance such as this one, some say a more effective route for willing governments to advance carbon mitigation projects would be for them to force companies to take responsibility for their emissions by putting a price on carbon.

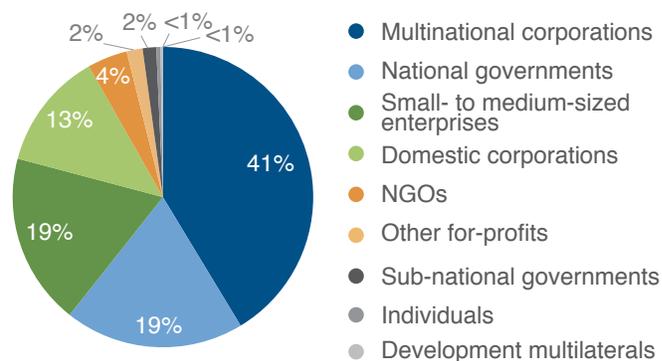
Individual offsetting programs have always been a minor contributor to voluntary carbon market size and that was the case again in 2013 when just over 200,000 tCO₂e were transacted by individuals. This small volume nonetheless captures hundreds of small transactions that attracted a significantly above-average volume-weighted price of \$17.4/tCO₂e.

Within these broad categories, this report's survey showed that only 24% of carbon offsets transacted were purchased by new buyers. Much of the offset volume transacted by new buyers was sourced from forestry projects (owing to the agreement between Acre and Germany) and at an average price of \$3.7/tCO₂e – well below the prices paid for offsets by existing buyers. Excluding the Acre deal, a full nine out of ten offsets were transacted to existing buyers.

Jason Patrick, Managing Director, The BioCarbon Group, confirmed that existing buyers who appreciate the principle of offsetting remain committed to the market, but that the limited number of new buyers is problematic for a market that is seeking to grow.

“My sense from speaking to folks outside of our industry is that people just aren't focused on offsets as much today,” Patrick said, advising, “We as an industry need to keep firms focused on the idea that offsets have a real place in a portfolio of actions.”

Figure 34: Market Share by Buyer Organization Type, 2013



Notes: Based on 50 MtCO₂e associated with a buyer organization type.

Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

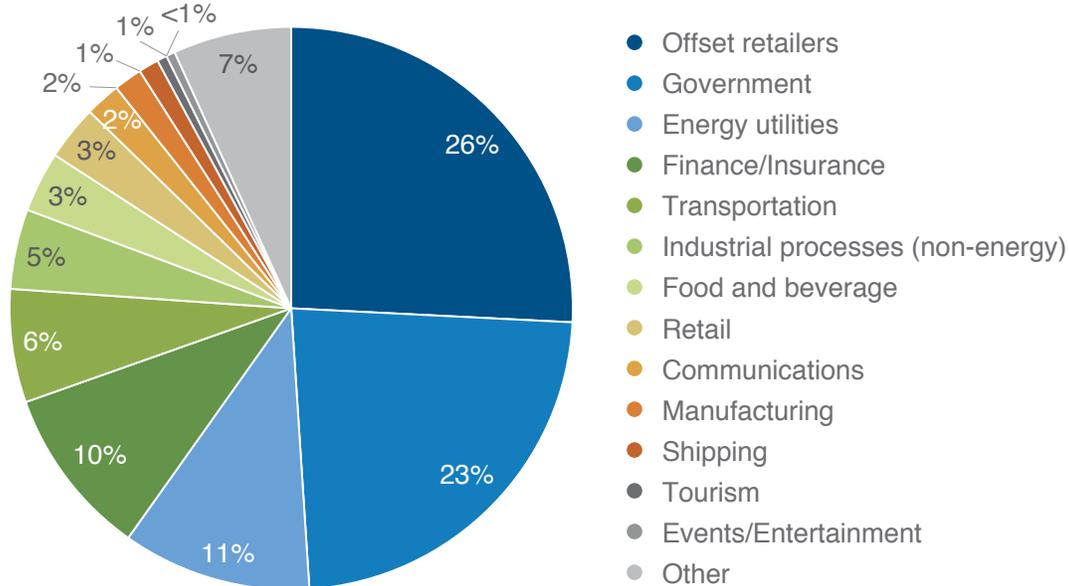
4.2 Which Business Sectors Actively Offset Their Emissions?

As in previous years, offset retailers buying offsets directly from projects to fill their clients' portfolios were once again the market's primary source of demand, transacting roughly 11.5 MtCO₂e and providing an important source of stability to the voluntary carbon market. But public sector investments and offset purchases nipped closely at their heels, totaling about 10 MtCO₂e that largely owed to the significantly sized agreement between KfW and Acre. Other government purchase programs were seen in South Korea, Mexico, Australia, and among individual US state governments.

In terms of industry sectors, energy utilities were the top source of offset end-use demand – interesting, given the year's absence of pre-compliance activity that typically characterizes utility demand. This buyer type was followed closely by financial and insurance industry participants such as Germany-based Allianz, a buyer for annual offsetting targets – which Allianz has already surpassed – and an investor pursuing real returns, explained Martin Ewald, Head of Strategy Infrastructure Equity at AllianzGI.

Alongside its traditional offsetting motivations, Allianz's aim is to generate a return on investment and to prove that carbon investments deliver attractive sustainable cases – leading by example and hopefully attracting a growing number of investors and financing further

Figure 35: Market Share by Buyer Sector, 2013 (% Share)



Notes: Based on 45 MtCO₂e associated with a buyer organization type.

Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

carbon mitigation, he said. "If they see a conservative investor like us investing in REDD, we hope that this serves as an idea for other investors that this might be something they could also be doing," Ewald said.

Transportation companies were also key offset purchasers in 2013. US-based Amtrak partners with Carbonfund.org to allow passengers to offset the carbon emissions generated by their rail travel, even giving their customers the option of choosing particular project types to sponsor. Virgin Australia airlines expanded its Fly Carbon Neutral program to include a partnership with the Tasmanian Land Conservancy, allowing its passengers to contribute toward the 30,000 hectares of land the conservancy purchases every year for permanent conservation throughout Tasmania. But transportation companies still rely on travelers to voluntarily offset their emissions, restraining overall purchases by the sector.

Figure 35 also mirrors findings in this section's discussion regarding offset motivations – particularly that public relations and branding all but fell off the list of drivers last year. Similarly, buyers at the top of the list (e.g., energy utilities, non-energy industrial companies) hailed from industries for which public exposure and reputation is not as critical as for those at the bottom of the list (e.g., retail products,

events and entertainment, tourism). Some market participants view this distribution as a "win" for the voluntary offset market, suggesting that for carbon-intensive industries, offsetting may increasingly be considered as "business as usual."

4.3 What Motivated Offset Buyers in 2013?

Partisan and ideological divides about the causes of global warming have largely prevented developed countries such as the United States, Canada, or Australia from taking or maintaining action to mitigate the consequences of climate change. But corporate voluntary buyers appear to be responding to growing concerns about global warming – as seen in 2013, when the "pursuit of a climate-driven mission or to combat climate change" became the top motivation for carbon offsetting.

Offset suppliers reported that their buyers ranked this motivation above all other justifications for offset purchases in 2013, driving 20% of offset purchases tied to a buyer motivation. Buyers have traditionally ranked their pursuit of social responsibility targets at the top of their list of offsetting motivations. While CSR remains among the market's top three motivations for offsetting, the volume of offsets that buyers transacted for CSR purposes declined by more than

half to about 6.9 MtCO₂e last year. In Europe – the world’s primary region for offset demand – buying for CSR reasons has waned amid ongoing budgetary pressures in the wake of the recession.

A number of corporates have the will to make sizable investments in carbon offsets and understand the positive benefits from a sustainability and marketing perspective, said Gerald Maradan, CEO of Eco-Act and chair of the International Carbon Reduction and Offsets Alliance. “The issue is that they don’t have the budget because of the crisis,” he said. “Many companies decided to postpone their neutrality policy and some companies even decided to stop offsetting simply because they don’t have the budget [in 2013].”

“But the trend is changing,” he added, “and we have great hopes for 2014.”

Offset suppliers say that CSR officers are also focusing less of their attention on voluntary carbon offsetting and more on targeted spending for energy efficiency or renewable energy initiatives that are not offset projects. Companies are trending toward managing and “greening” their supply chains by, for example, investing in emissions reduction activities at dairy farms that do not necessarily generate offsets but help make these farms more competitive and profitable and build better relationships with farmers

in their supply chains or spheres of influence. But even here, voluntary carbon offsetting has a small, but noteworthy role as 2% of offset purchases were motivated by a desire to incentivize practice change or support sustainable development in their supply chains.

However, there are reasons that CSR-driven offsetting could see a resurgence in response to emerging domestic carbon regulations. In India, for example, an escalation in CSR-related offset purchases is expected to be linked to the country’s Companies Act. The Indian government published regulations that took effect April 1, requiring companies meeting certain financial thresholds to contribute 2% of their average net profits to CSR initiatives or declare why they are not spending that amount in annual reports, according to a bulletin by law firm Fasken Martineau. An estimated 16,000 companies could be affected by the new rules.²¹

Companies’ desire to demonstrate climate leadership within their industry or in policy was the second most-cited motivation in 2012, but ranked fourth among 2013 buyers. However, some major corporate buyers are still showing leadership by financing the development of new offset methodologies. After conducting much of the development work in 2013, Chevrolet launched a new program that aims to reward US-based colleges and universities for renewable energy and energy efficiency projects undertaken via a new VCS methodology in February 2014 and pledged to spend roughly \$5/tCO₂e to purchase around 500,000 carbon offsets from these schools.

Chevrolet’s active participation in the voluntary carbon market was triggered by its decision to spend \$40 million to voluntarily reduce its emissions by up to 8 MtCO₂e by 2015 – a reduction equal to the US emissions caused by driving the 1.9 million vehicles Chevrolet sold in the United States during that year. The automaker is closing in on that goal, with commitments from carbon projects to deliver nearly 7.7 MtCO₂e – 3.6 MtCO₂e of which have already been delivered and retired – of emissions reductions.

“People who are educated and articulate about carbon and the carbon market – we didn’t have to do much study to know that those people were probably not considering Chevrolet products,” explained Chevrolet’s David Tulauskas. “If we’re going to

Table 2: Offset End Users’ Top Offsetting Motivations, 2013

Motivation	Ranking by % Share
Climate-driven mission	20%
Corporate social responsibility	19%
Demonstrating climate leadership	14%
Engaging customers/clients	10%
Incentivizing supply chain practice change	2%

Notes: Based on 37 MtCO₂e associated with an offset end user motivation. Excludes 32% associated with offset resale.

Source: Forest Trends’ Ecosystem Marketplace. *State of the Voluntary Carbon Markets 2014*.

²¹ <http://www.fasken.com/en/india-releases-csr-policy-rules-companies-act/>

change peoples' perception [about the Chevrolet brand], we can't just do it the traditional way and that was the thinking behind this carbon reduction initiative. We needed to do something completely different, something that no other [offset buyer] has done, and engage a consumer that's not considering us today. That's why it was a significant financial contribution and a multi-year commitment to do this."

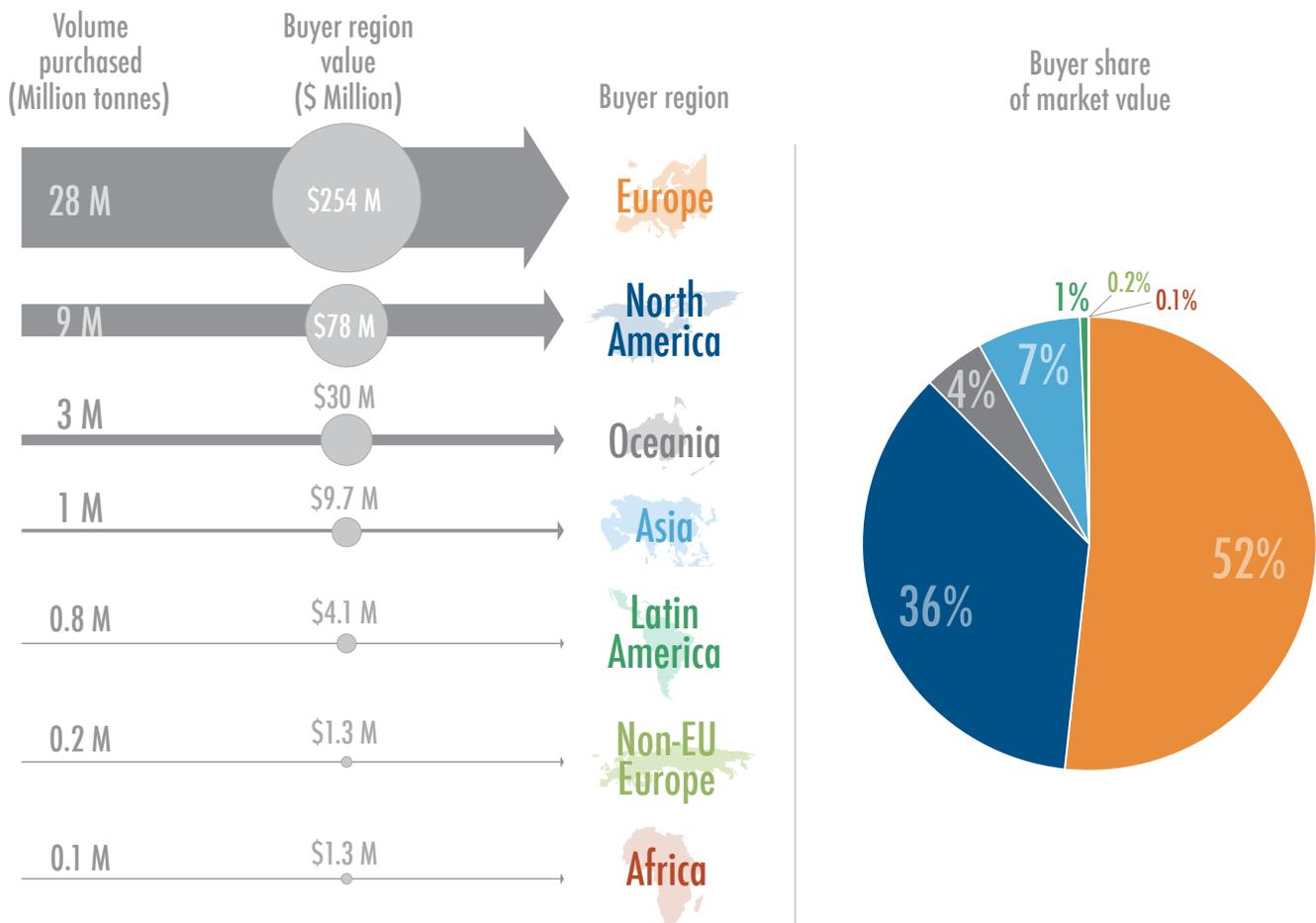
Chevrolet's offsetting program intentionally focuses on projects in the United States, but other US-based corporations such as The Walt Disney Company and Microsoft have committed to transact significant offset volumes from projects overseas using the revenues generated from their internal carbon fee programs. Microsoft has contracted offsets from over 20 carbon offset projects in countries such as Brazil, Cambodia, Ghana, Guatemala, India, Indonesia, Kenya,

Madagascar, Mexico, Peru, and Turkey. Both companies have shown a particular affinity for REDD projects, with Disney donating \$3.5 million to a Conservation International REDD+ project in the dwindling Alto Mayo Protected Forest in Peru that has generated 3 MtCO₂e and delivered a host of benefits for the local populations.

"We like projects that have co-benefits and side benefits in addition to just pure GHG benefits," said Bob Antonopolis, Assistant General Counsel for The Walt Disney Company. "We're really drawn to forestry projects and we're really drawn to reforestation projects in particular that have watershed protection, habitat rehabilitation as well as a GHG component."

Anticipation of direct regulation has also been near the top of the reasons for voluntary offset transactions, but pre-compliance buying hit an all-time low in 2013. The

Figure 36: Transacted Volume, Value, and Average Price by Buyer Region, OTC 2013



Notes: Based on 45 MtCO₂e associated with a buyer region.

Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

plunge in pre-compliance activity can be attributed to the migration of voluntary purchases of certain forestry, livestock, and ODS offsets into the California compliance program, as well as the evaporation of pre-compliance activity under Australia's CFI as a new federal government elected last year pledged to repeal the country's carbon tax. Carbon market participants lamented the Australian government's decision, which they say sends the wrong signal to buyers about the viability and strength of the carbon markets.

4.4 Where Are Offset Buyers Located?

This report's survey gathered responses from suppliers and buyers in 57 countries and projects based in a record 60 countries. Regional market dynamics are explored in more depth in this report's Regional Market Deep Dive (Section 5).

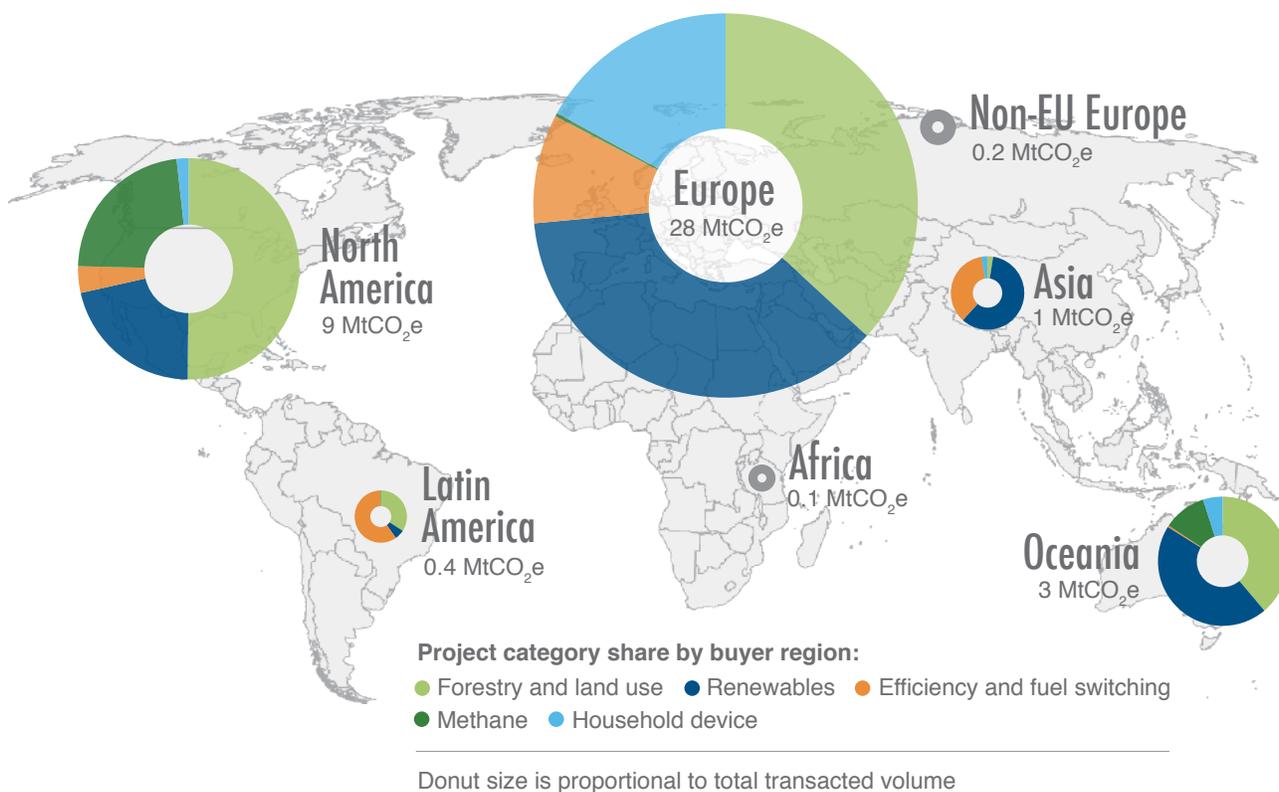
At the regional scale, European companies remained the most prolific offset buyers, purchasing 28 MtCO₂e

in 2013 – which was down significantly from 2012's 43 MtCO₂e as Europe continued to contend with the lingering effects of a financial recession. More than half of those offsets were from projects based in Asia, while 32% were from Africa and 15% from Latin America.

Voluntary demand waned from North America in the wake of many market participants' transition to California's new regulated carbon market and due to minimal activity reported via the CCX's offset program. The majority of offsets transacted by North American buyers were sourced from domestic projects, in keeping with their preference for projects in their own backyard, and often with a focus on directly mitigating the effects of their operations or otherwise touching the local community. However, more than 1 MtCO₂e of offsets were transacted from Africa, owing to interest from multi-national companies backing projects activities that reflect their international footprint.

Asian companies' demand was once again slight

Figure 37: Transacted Volume and Market Share by Project Category and Buyer Region, OTC 2013



Notes: Based on 45 MtCO₂e associated with a buyer region.

Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

(1 MtCO₂e) compared to the volume of offsets supplied from Asian projects to international buyers (21 MtCO₂e).

Offsetting in Latin America has traditionally been limited, but in September 2013, Brazilian cosmetics giant Natura Cosméticos grabbed headlines when it transacted 120,000 tCO₂e of carbon offsets from the Paiter-Suruí, an indigenous people of the Amazon who in June 2013 became the first indigenous people to generate offsets by saving endangered rainforest using the VCS REDD standard. The region's largest cosmetics manufacturer committed to reducing its GHG emissions by one-third from 2006 levels by the end of 2013 and has offset 100% of its emissions since committing to carbon neutrality in 2007. Overall, Natura Cosméticos and other Latin America-based companies transacted 0.7 MtCO₂e from domestic projects in 2013.

4.5 What Were the Terms of Payment and Offset Delivery?

Offsets contracted voluntarily are obtained “over-the-counter,” where transactions are guided by several types of contract structures, including:

Spot Transaction: Offsets and payment are exchanged instantaneously. Some organizations also accept payments to retire offsets on the payee’s behalf. This type of transaction may be included in this category or in the “pre-payment” category, depending on the offset project’s stage.

Pre-payment versus Pay-on-Delivery (POD): Future offset delivery (may be near or distant future) is paid for up front (Pre-Pay) or upon delivery (POD). Prepayment is typically preferable to project developers seeking up-front project financing, but may incur a discount depending on the potential delivery risk incurred by the buyer.

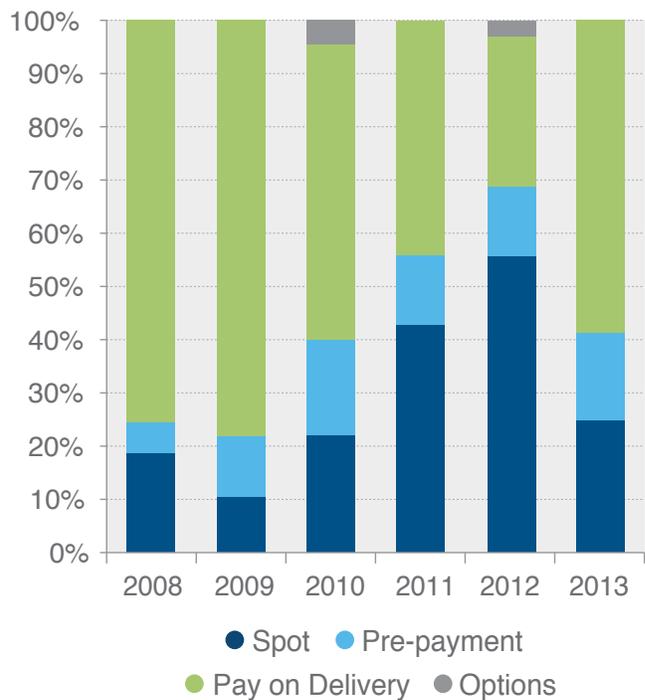
Firm versus Unit-Contingent Delivery: Contracts also specify the quantity of offsets to be delivered, either as a “firm” volume or a flexible volume contingent upon how many offsets the project eventually issues. Pricing for these different options can vary according to lots of other factors that are described throughout this report.

In 2013, around 12.7 MtCO₂e were transacted on a spot basis, down by almost two thirds from the 35.6 MtCO₂e transacted on a spot basis in 2012. In contrast,

nearly 30 MtCO₂e of offsets were transacted with the expectation that the buyer would pay upon delivery. Even when combining both spot transactions and those for which buyers paid up front for future delivery (8.3 MtCO₂e), transactions that delivered an immediate injection of cash to offsets suppliers made up just over one-third of overall market activity.

One of the continuing challenges for voluntary carbon projects is the lack of a forward market, which is increasing projects’ price risk in the absence of contracts that guarantee off-take of offsets over a multi-year timeframe. Only 16% or 13 MtCO₂e of offsets were transacted from post-2013 vintages (i.e., paying for emissions reductions that had not yet occurred). Suppliers say that buyers’ refusal to take risks on future project investments, as well as the market conditions that have led to this behavior, are increasingly noteworthy challenges, particularly with respect to companies that must answer to shareholders or rating agencies. NativeEnergy’s Help BuildTM program tackles this issue by allowing companies such as eBay and Ben & Jerry’s to directly

Figure 38: Historical Market Share, Transacted Volume by Payment Method, 2013 (% Share)



Notes: Based on 51 MtCO₂e associated with a contract type.

Source: Forest Trends’ Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014.*

finance a variety of new carbon projects. The program helps bridge a major financing gap because companies are pre-paying for future emissions reductions, which allows projects that likely would not have happened otherwise to move forward.

“No one wants to take price risk,” said Jeff Bernicke, NativeEnergy’s President. “We take price risk out of the equation. That’s very powerful, and it’s also a way for us to shape the project. We are finding companies are looking for these impact investments.”

5. Regional Market Deep Dive

5.1 Introduction

This section explores regional trends in the demand for and the supply of voluntary carbon offsets. The tables provide a breakdown by region, spotlighting the most common project types, buyer sectors and motivations, standards, and more. Where there is sufficient data, we present important developments by country. While project location is just one of many ways to “cut the cake,” where a supplier or their offset projects call home is a starting point to understand regional contributions to market-wide volume and value.

5.2 Asia: Traditional Projects Stagnate, Markets Begin Branching Out

Asia remained the world’s primary supplier of offsets, although its edge over Latin America narrowed significantly last year thanks in large part to the proliferation of projects in Latin America’s forestry sector (see Latin America section 5.3).

In typical fashion, projects in India and China supplied large volumes of low-priced renewable energy offsets to European buyers – and primarily via European offset retailers. While the types of offsets supplied from these CDM-dominant countries – traditionally from a mix of renewable energy interventions – continue to eclipse all other project types in India, China started to diversify with a growing number of household device distribution, methane and gas projects. Elsewhere in Asia, renewables still reign supreme, but forestry and

land use and energy efficiency projects accounted for a combined 4.7 MtCO₂e transacted. Despite higher average prices for non-renewables, the overall value of offsets transacted from the region fell by 25%, to \$93 million last year.

Asia’s increasingly varied supply of project types may stem from a wider spread of buyer locations, with Oceania as the source of 13% of all transactions on the voluntary carbon market and buyers Down Under favoring forestry and land use, energy efficiency and methane capture projects. Homegrown demand in Asia also grew, seeing .7 MtCO₂e transacted to Asia-based buyers. These domestic buyers heavily favored offsets within their own borders. This demand may be fueled, in part, by nascent compliance and voluntary markets – current and planned – in China, Korea, Thailand and Indonesia. Forestry and land use transactions comprise of the majority of these Asia-to-Asia transactions.

India retained its position as the leading supplier of offsets in the region with 7.6 MtCO₂e transacted, continuing a trend seen in last year’s report. Renewables topped the chart, behind 97% of all transactions, with household device distribution and efficiency and fuel switching projects accounting for the remainder.

Overall, the 34% decline in India’s 2013 transacted volume stood on par with China’s 39% decline. In both countries, limited demand resulted in lower prices and fewer transactions rather than a supply shortage. Both countries’ projects also sold for much less than average on the voluntary market, compared to projects worldwide, at \$1.6/tCO₂e.

Parallel to India’s experience, **China** saw total transactions dip to 6.4 MtCO₂e. Unlike its western neighbor, project developers were decidedly optimistic about the future due to the country’s growing project type variety and domestic interest in co-benefits. This year, renewables comprised a lower-than-normal 73% of all transactions, with household device distribution, methane and other GHG destruction filling in the rest. Although there are few active forestry and land use projects now, developers speak of growing interest – particularly from domestic buyers.

Table 3: Asia by the Numbers, 2013
(all in MtCO₂e and USD\$)

	Total, 2013	% Change from 2012
Volume supplied	21 Mt	-27%
Average price	\$2.4/t	-31%
Value	\$93 M	-25%
Volume purchased domestically	1 Mt	-54%

Source: Forest Trends’ Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014.*

Table 4: Asia: Transacted Offset Types and Offset Buyers, OTC 2013

Top Transacted Offset Types, Asia-based Offsets, 2013					
Project Category		Project Stage		Standard Use	
Renewables	69%	Issued	90%	VCS	77%
Efficiency & Fuel Switch	12%	PDD	9%	CDM	12%
Forestry	11%	Validated	1%	Gold Standard	6%
Top Buyers of Asia-based Offset, 2013					
Buyer locations		Buyer Sectors		Buyer Motivations	
Europe	78%	Retail Offset Market	33%	Offset Resale	36%
Oceania	13%	Energy	19%	Corporate Social Responsibility	22%
North America	5%	Finance/ Insurance	19%	Climate Leadership	15%

Notes: Based on 16.5 MtCO₂e associated with either offset project or buyer location. Survey respondents may not answer every question pertaining to buyers – thus percentages pertaining to buyer sector and motivation may not be aligned.

Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

Last June, China made headlines with the launch of its first pilot emissions trading program in Shenzhen. Since then, six more pilots have come online and their 2013 allowance allocations, totaling 1,115 MtCO₂e, make these combined pilots the second largest ETS in the world, after the EU ETS. While the programs have drawn praise for their quick implementation, market experts worry that lack of liquidity may plague their futures. China plans to transition to a national trading program in 2016.

Potential for local demand for offsets is stronger than at any other time with the pilots now operating. Yet vague regulations and uncertain demand means that most Chinese suppliers and buyers are taking a wait-and-see approach. That hasn't stopped some early movers, who have completed small voluntary transactions to capture media attention or prepare for trading under their compliance obligations.

Rising attention to offsetting, courtesy of the pilot markets, generated additional interest in developing new methodologies and guidelines for the voluntary market. Wenjie Zhuang, Senior Project Manager at Climate Bridge, expressed enthusiasm about this trend: "Project developers in China used to only adopt methodologies developed by those experts in developed countries. But now more and more Chinese experts do research on the methodologies."

The seven pilots may also spur additional voluntary transactions from areas excluded from the plan. Several cities have expressed interest in the ETS, but the pilot programs currently remain closed to newcomers. However, some experts expressed reservations about the potential for greater voluntary market transactions in lieu of compliance markets within China, citing the National Development and Reform Commission's (NDRC) desire for untainted pilot programs as a reason for limiting large-scale participation in the voluntary market by compliance companies or by non-compliance regions seeking to emulate the pilots.

The NDRC plans to establish an ETS registry so companies can use the approved domestic China Certified Emissions Reductions (CCER) to offset their emissions. Borrowing from the CDM, the program allows for domestically-sourced CERs to convert into CCERs. While some voluntary projects are also eligible to convert, market experts say it is more likely that project developers will first seek to convert their CERs to CCERs in hopes of finding a better market for those offsets lacking in co-benefits.

Unlike China, **Japan** is no newcomer to carbon offsetting, having previously established the J-VER and J-CDM programs. However, methodologies under these standards were combined last year under

the newly launched J-Credit Scheme. Previously, the two older standards could fulfill different obligations; the J-VER was for purely domestic voluntary offsetting, while the J-CDM fulfilled “voluntary” offsetting requirements for all member companies of the Japan Business Federation (Nippon Keidanren) and accounted for any reductions included under Japan’s mandatory emissions reporting law.

While according to its administrators the J-Credit Scheme marks an improvement for the country’s offset suppliers and buyers, transactions still tumbled in the country. Experts attribute this, in part, to Japan’s withdrawal from the Kyoto Protocol’s second compliance period and the government’s revised, less ambitious goal of reducing GHG emissions by 3.8% from 2005 levels. However, changes could be in store as the government re-examines the need to keep all nuclear power plants offline.

In the meantime, Japanese buyers continue to prefer forestry projects. Noriko Hase, Senior Researcher at the Overseas Environment Cooperation Center, explained that, “Forest project credits are quite popular with companies — but at the same time, a forestry credit is a little more expensive than an energy credit.” Hase observed that, similar to European retailers’ “portfolio approach” (see also Section 5.5), Japanese buyers prefer to fill out the majority of their portfolios with more affordably-priced renewable energy offsets and include a smaller proportion of offsets from domestic forestry for marketing purposes.

While China’s pilots are the first compliance markets in Asia, they are by no means the last. In **Korea**, national policymakers are preparing for the country’s 2015 compliance ETS, expected to eclipse China’s pilots as the world’s second largest carbon market. Earlier this year, the country gave management rights to the Korea Exchange, which will oversee the trade of allowances from the country’s 400+ biggest emitters.

The scheme will limit options for companies to cut emissions through fuel switching or technology upgrades. Consequently, these project types made up most of the country’s 2.2 MtCO₂e voluntary transactions.

Elsewhere in Asia, **Thailand** is gearing up its own domestic ETS. In addition to VERs developed under international standards, Thailand’s Greenhouse Gas Management Organization introduced a new standard for the domestic offsets under the Thailand Voluntary Emission Reduction Program in late 2013.

The organization plans for these offsets to be traded locally in the upcoming Thailand Voluntary ETS.

Together with other continental Southeast Asian countries **Vietnam** and **Cambodia**, the region saw .63 MtCO₂e transacted, mostly in renewables and some household devices. Southeast Asia as a whole continues to work on capacity building for REDD+ and other forestry programs, yet actual project implementation remains a ways off. One notable exception is Cambodia’s Oddar Meanchey REDD+ project, which became the first in the world to achieve Gold verification under all three levels of the CCB Standards last year.

In Asia-Pacific, **Indonesia** and **Malaysia** garnered 2.7 MtCO₂e with almost exclusive emphasis on forestry/land use. While Indonesia made up the bulk of those transactions, Malaysia showed the largest jump in sales of all countries last year, going from nearly nothing to 0.3 MtCO₂e. Indonesia also threw its hat into the voluntary ETS ring by announcing that it will develop voluntary emission reduction certificates for domestic carbon emitters.

5.3 Latin America: Forestry Going Strong, Becoming Overgrown?

Market activity in Latin America surged last year as its focus on forestry paid off with the latest UNFCCC conference providing momentum toward recognizing and, ideally, financially backing REDD+ in the international context. Many Latin American countries have long been developing frameworks and safeguards for these projects, and forestry’s co-benefits are increasingly capturing the interest of both private and sovereign finance. Strong national and

Table 5: Latin America by the Numbers, 2013
(all in MtCO₂e and USD\$)

	Total, 2013	% Change from 2012
Volume supplied	19 Mt	+157%
Average price	\$5.0/t	-39%
Value	\$131 M	-97%
Volume purchased domestically	0.4 Mt	+43%

Source: Forest Trends’ Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

sub-national endorsements, coupled with international funding, gave rise to REDD+ projects across the region, including a significant agreement between the Brazilian state of Acre and the German development bank KfW that could represent a shift toward greater voluntary public sector finance for delivering REDD+ outcomes.

The region's offset price tumbled by 39% to \$5/tCO₂e. However, value and volume rose to advance transactions worth \$131 million – almost \$40 million more than Asia, the next largest region. Tempering the good news, project developers warned that as more large-scale and charismatic projects enter the market, additional price erosion could force sales below the project value. “With so many projects in the market with good stories; [buyers] will tend to buy credits at the lowest price,” explained Andres Huby, Investment Manager at Bosques Amazonicos.

Latin America also saw new precedents in 2013, including growth in domestic transactions, the launch of two voluntary exchanges, and donor agency payments for REDD+ performance²². Around one quarter of the region's transacted volume last year came from buyers within Latin America, with companies ranging from domestic corporations to small- to medium-sized enterprises and multinational corporations.

Project types in the region tilted overwhelmingly in favor of forestry projects (80% of transacted volumes), a change from 2012 when transacted offsets were supplied by a broader array of project types. Almost all the forestry projects in the region stem exclusively from REDD activities – a trend likely to continue as donors unlock finance for jurisdictional and national REDD+ program implementation. In particular, the World Bank's FCPF, Forest Investment Fund and Partnership for Market Readiness as well as Germany's REDD+ Early Movers Programme all finance extensive activities in Latin American countries.

The volume of offsets from other project types such as renewables, household device distribution and efficiency/fuel switching projects dove both in

absolute terms and as a percentage of the total market – particularly for cookstove distribution projects, from which transacted volumes plummeted from 1.6 MtCO₂e to .56 MtCO₂e. Those projects still supplied the bulk of offsets transacted from projects in **Honduras** (90%) and **Guatemala** (30%). **Colombia** is also actively considering championing cookstove distribution with the potential creation of a national plan for building stoves throughout the country.

Of the offset volumes transacted from the region's VCS-accredited projects, three-fourths utilized both VCS and the CCB Standards and another 11% were certified to both VCS and SOCIALCARBON. In addition to VCS, the Gold Standard and Plan Vivo guided the development of projects transacting 7% and 1.5% of the region's volume, respectively. However, the proportion of offsets transacted from projects utilizing internationally accredited standards fell slightly from last year; this year's rise in internal and proprietary standards can be linked to initiatives both small and large: from the Peru Carbon Fund's work with smallholders in the Amazon rainforest to Acre's agreement with KfW²³, to the use of other regional standards including Costa Rica's National C-Neutral Standard and the Rainforest Standard.

The forestry sector's deployment of VCS methodologies will likely grow as the standard reached a number of agreements with national and sub-national governments looking to utilize the VCS JNR requirements for regional REDD+ development. Costa Rica and Chile, the first countries to formally involve an independent standard in their nesting strategies in 2012, continue to flesh out the details for their national plans while Brazilian states Acre and Amazonas and Peruvian states San Martin and Madre de Dios represent expanded work at the sub-national level. Acre remains the most advanced of all JNR pilots with the program currently undergoing pre-validation and seeking to issue VCUs in 2014.

Elsewhere in **Brazil**, a notable transaction last year saw the Paiter Surui become the first indigenous community to develop and transact REDD+ offsets. The Surui also made headlines when their first verified offsets were purchased by Brazilian cosmetics

²² Due to the fact that the sizable 8 MtCO₂e agreement between the Brazilian state of Acre and the German development bank KfW skews regional results, detailed regional analysis regarding buyers, standards and project types was calculated excluding this agreement unless otherwise noted.

²³ See Section 3.2 for more information about the Acre Carbon Standard's relationship to VCS and regional jurisdictional nested REDD+ developments.

Table 6: Latin America: Transacted Offset Types and Offset Buyers, OTC 2013

Top Transacted Offset Types, Latin America-based Offsets, 2013					
Project Category		Project Stage		Standard Use	
Forestry & Land Use	88%	Issued	88%	Internal/Proprietary	66%
Renewables	4%	Validated	6%	VCS/CCB	17%
Efficiency and Fuel Switching	3%	PIN	5%	VCS/SOCIALCARBON	11%
Top Buyers of Latin America-based Offset, 2013					
Buyer locations		Buyer Sectors		Buyer Motivations	
Europe	79%	Government	63%	Offset Retailer	42%
Latin America	15%	Retail Offset Market	17%	Climate Leadership	37%
North America	5%	Energy	11%	Corporate Social Responsibility	13%

Notes: Based on 4.9 MtCO₂e associated with either offset project or buyer location. Survey respondents may not answer every question pertaining to buyers — thus percentages to buyer sector and motivation may not be aligned.

Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

company Natura. Project developers hope this will send a signal to other local companies, who have begun to express interest in both Brazilian and other Latin American projects. In particular, they hope the World Cup will draw headlines to voluntary offsetting in the country. The Brazilian government publically encouraged companies to buy and retire compliance offsets in Brazil's name and the international football league FIFA staged the Cup as a carbon neutral event through its own offset purchases in mid-2014, and by encouraging travelers to offset through selected Brazilian voluntary projects.

Overall, the country transacted the most offsets for the region even without Acre's inclusion at 4.72 MtCO₂e (12.72 MtCO₂e with Acre). However, Brazil's refusal to acknowledge offsetting at the international climate negotiations still limits activities to the sub-national level.

"Although we see a very important development in REDD+ on the international arena because of its recognition under the convention, there are still limiting factors to scaling up on-the-ground private investments in Brazil," said Mariama Vendramini, Finance and Commercial Director of Biofilica. "The Brazilian government so far has been against markets and offsets... By holding this position, the Brazilian

government is reducing the potential of using positive incentives to conserve forests and leverage private capital towards REDD+."

In contrast to Brazil's bottom-up approach, some states elsewhere in Latin America have shown strong interest in developing national REDD+ programs. **Peru**, the host country to 2014's COP 20, is keen to promote a focus on forestry – and is starting at home. Last year, the country presented its investment plan to the mix of multilateral development banks funding the Forest Investment Program and formulated a national REDD+ plan to present to FCPF. According to local developers, the Peruvian government hopes to finalize a jurisdictional REDD approach by the end of the year. Project-level offset transactions from Peruvian projects also rose last year to 4.2 MtCO₂e, competing closely with Brazilian transaction levels (excluding Acre), thanks in part to high-profile buyers Walt Disney and Latin America's largest air carrier, Latam Airlines, which both purchased Peruvian forestry offsets.

Mexico, the third largest source of transactions in the region, more than quadrupled its level of activity in 2013. MEXICO2, the first carbon-trading platform, launched in November 2013, to serve as a voluntary initiative for local companies to offset their emissions. The platform requires all offsets be accredited under

internationally recognized protocols such as VCS or The Gold Standard. It coincidentally launched shortly before Mexico's new mandatory carbon tax on fossil fuels. While details of the law are incomplete, officials have publically and repeatedly said offsets will be an option within the tax requirements.

On the REDD front, CAR's board approved its Mexico Forest Protocol in October 2013. And, with support from Walt Disney, the community of San Juan Lachao in Oaxaca, Mexico announced the development of the first pilot carbon offset project under the protocol in November 2014. The protocol was developed to be adaptable into a national Mexican REDD+ program in the future, with the potential of linking with California.

The MEXICO2 marks the region's second carbon exchange to be launched last year, as **Costa Rica's** BanCO2 platform also went online. The platform closely followed the launch of the Costa Rican Voluntary Domestic Carbon Market, which became fully active in September 2013. The platform and program acknowledge the use of CERs, VCU and locally-produced Costa Rican Compensation Units for voluntary offsetting purposes. Costa Rican companies wishing to achieve carbon neutrality through offsetting will then receive a label in recognition. Currently, more than 10 companies are seeking or have already received the label.

The **Chilean** government wants to develop a compliance ETS, but so far it remains in the design phase. However, the government established a "Platform for the Generation and Trading of Carbon Credits from the Forestry Sector in Chile" in partnership with the VCS in late 2012. The platform is currently undergoing implementation and pilot testing, in preparation for the generation of emissions reductions in 2015. In the interim, the Santiago Climate Exchange continued to facilitate limited voluntary action among participating Chilean businesses in 2013.

Colombia is also considering a voluntary ETS, similar to those described above. Roberto Leon Gomez Charry, Deputy Director of Fundación Natura, explained the government's burgeoning role in the voluntary markets by noting the problems with CDM: "I think [the Colombian government] is becoming much more supportive because they understand that you cannot put all of your eggs in the same basket. I think they were betting exclusively on the CDM, but a lot of people have come to them asking why they are still

supporting the CDM if the prices are below \$1/tCO₂e. So they're diversifying their portfolio options."

5.4 Africa: Co-benefits Propel Region to Record Sales

Offset transactions from Africa-based projects reached record levels in 2013 as buyers continued to show a preference for projects with strong health or biodiversity benefits such as clean cookstove distribution, water purification, and REDD+. At least 11 MtCO₂e of offsets were transacted from Africa-based projects last year, up from about 8 MtCO₂e in 2012. Africa's voluntary carbon transactions were valued at \$83 million as the region took home 18% market share. Average prices for Africa-based projects fell to \$5.6/tCO₂e, down from last year's \$8.3/tCO₂e but still higher than global average pricing.

Kenya retained its just-podium-shy place in 2013 as the world's fourth largest offset supply location, generating 4.8 MtCO₂e in transaction volume valued at \$43 million. The average offset from a project in Kenya transacted at approximately \$4/tCO₂e, more than the global average, as water purification and avoided deforestation projects held their ground – and as buyers paid a premium for offsets with verified co-benefits.

The **DRC**, one of four countries to be accepted into the World Bank's Carbon Fund REDD pipeline in 2014, also made a strong showing on the voluntary market last year, with DRC-based projects transacting 1.4 MtCO₂e – all from REDD activities. The DRC hosts the most advanced jurisdictional REDD efforts in Africa in its Mai Ndombe province, and early in 2013 developer ERA Carbon Offsets (now "Offsetters") announced the first sale and delivery of offsets from the project to German buyer Forest Carbon Group

Table 7: Africa by the Numbers, 2013
(all in MtCO₂e and USD\$)

	Total, 2013	% Change from 2012
Volume supplied	11 Mt	+39%
Average price	\$5.6/t	-32%
Value	\$83 M	+16%
Volume purchased domestically	0.1 Mt	+198%

Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014.*

Table 8: Africa: Transacted Offset Types and Offset Buyers, OTC 2013

Top Transacted Offset Types, Africa-based Offsets, 2013					
Project Category		Project Stage		Standard Use	
Forestry & Land Use	51%	Issued	74%	VCS/CCB	52%
Household Device Distribution	46%	PDD	18%	Gold Standard	41%
Energy Efficiency and Fuel Switching	2%	Validated	6%	CDM	6%
Top Buyers of Africa-based Offset, 2013					
Buyer locations		Buyer Sectors		Buyer Motivations	
Europe	85%	Retail Offset Market	45%	Offset Retailer	40%
North America	14%	Energy	19%	Engage Customers/ Clients to Offset Emissions	24%
Oceania	1%	Finance/ Insurance	12%	Climate-Driven Mission; To Combat Climate Change	23%

Notes: Based on 9.5 MtCO₂e associated with either offset project or buyer location. Survey respondents may not answer every question pertaining to buyers – thus percentages pertaining to buyer sector and motivation may not be aligned.

Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

AG. Acceptance into the Carbon Fund pipeline unlocks a potential \$50 million to \$70 million for REDD development in the DRC.

Projects in Ghana, South Africa, Tanzania, and Uganda, among other countries, also contributed to Africa's growing market share. **Sudan**, for instance, registered its first carbon project in 2013 – a Gold Standard clean cookstoves project in conflict-recovering Darfur. The **Madagascar**-based Makira REDD project, the first government-owned project in Africa to generate offsets, verified to VCS.

VCS gained market share in Africa in 2013, with more than half of transacted tonnes on the continent attributed to a project under development with the standard, up from 31% in 2013. The Gold Standard ran a close second, holding 40% market share in Africa. It's also clear that African projects are gaining prominence within the voluntary standards themselves: nearly half of Gold Standard's transacted tonnes in 2013 were from Africa-based projects, as were almost a fifth of VCS' transacted tonnes.

Though Africa has contributed relatively little to historic GHG emissions globally, compliance markets do have a role to play on the continent, especially as developed countries look to Africa for least-cost emissions reductions. New rules adopted by the CDM Executive Board in June 2013 created a potentially larger role for African project development by establishing standardized baselines for specific project types, therefore cutting red tape. The EU's decision to allow new project registrations only from Least Developed Countries after 2012 also pointed to a stronger role for African CERs.

However, CDM growth in Africa appears to have leveled off at around 250 projects – about 3% of all CDM projects – since current CER prices (an average of \$0.51/tCO₂e in 2013) do not inspire project development. Given the floundering prices on the CDM, some African project developers are diversifying their risk by registering their projects under voluntary carbon standards. DeAgua Health, for instance, a clean cookstove and water filter distributor working in **Rwanda**, registered its program of activities with both CDM and ACR – the latter in

hopes of attracting US voluntary buyers they view as partial to a US-focused standard.

Matt Spannagle, Climate Partnerships Manager at DelAgua, recognizes that the current carbon market situation is “pretty bleak,” but he still views carbon finance as practically aligned with cookstoves and water filter distribution, since offset verification depends on monitoring that they would need to do anyway.

“Fundamentally [the number of carbon offsets verified] goes back to uptake rates – we need to demonstrate that people are reducing their fuelwood use,” he said. “To demonstrate that, you need to go back to the households again and again. For us to maximize revenues, we maximize monitoring.”

South Africa's proposed carbon tax – the only pending national compliance carbon market on the continent – dealt with another delay as the program's start was pushed back to 2016, but a policy paper released early in 2014 gave more shape to the role of offsets in the program. In particular, the paper carves out a strong role for offsets developed under voluntary standards VCS, The Gold Standard, and CCB, which, alongside CERs, will be eligible for use by compliance entities so long as the project passes the scrutiny of the Designated National Authority.

Compliance entities under the tax may use offsets to cover up to 10% of their emissions, generating a potential demand of 30 MtCO₂e, according to an analysis by project developer Camco Clean Energy. Though the potential is significant, some market participants are waiting to see how the policy will play out before making any investment decisions.

“In the short-term, I don't see much additional carbon project development activity until we have more certainty around the actual implementation of the carbon tax,” said Duncan Abel, who is responsible for forest carbon origination at Nedbank Capital, based in Johannesburg.

5.5 North America: Market transitions and demand-side trials

The **US state of California** launched its cap-and-trade program in January 2013. As such, the transaction of millions of offsets from forestry, livestock methane management, and domestic ODS projects in North America – that were previously tracked as “voluntary” – migrated into the compliance market last year.

Table 9: North America by the Numbers, 2013
(all in MtCO₂e and USD\$)

	Total, 2013	% Change from 2012
Volume supplied	5 Mt	-77%
Average price	\$6.0/t	-11%
Value	\$40 M	-76%
Volume purchased domestically	9 Mt	-68%

Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

California's cap-and-trade program is a key element of the state's plan to comply with its pledge to reduce its GHG emissions to 1990 levels by 2020, with carbon offsets playing a critical role in controlling the costs of achieving the emissions reductions mandated by the state's Global Warming Solutions Act of 2006. Regulated entities are allowed to purchase offsets against up to 8% of their emissions and preparations for California's compliance program motivated much of North American buyers' voluntary offset purchases in recent times – over the last three years, averaging 9 MtCO₂e/year in voluntary offset demand as tracked in this report series.

Previous years' volumes were also boosted by legacy transactions of offsets from the CCX program, which ramped up in anticipation of a 2009 US nationwide cap-and-trade bill that never passed in the US Senate and ceased operations at the end of its first compliance period in 2010. Since then, demand for CCX offsets – which are now transacted bi-laterally and “off exchange” – waxed and waned, falling to a scarce 139,000 tCO₂e in 2013, from 8.3 MtCO₂e in 2012.

Absent these transaction volumes, the region's remaining purely voluntary projects transacted 5.1 MtCO₂e compared to 23 MtCO₂e reported in 2012, and with their total market value falling to \$40.3 million. The region's average offset price also took a slight hit reflecting the absence of higher-priced pre-compliance offsets – at \$6/tCO₂e versus \$6.7/tCO₂e in 2012. This average price exceeds 2013's global market average (\$4.9/tCO₂e) but fell short of California's now-compliance offset prices, which suppliers estimated in the \$9/tCO₂e-\$9.25/tCO₂e range.

Table 10: North America: Transacted Offset Types and Offset Buyers, OTC 2013

Top Transacted Offset Types, North America-based Offsets, 2013					
Project Category		Project Stage		Standard Use	
Methane	34%	Issued	79%	CAR	32%
Gases (ODS & N ₂ O)	26%	Validated	18%	VCS	56%
Forestry & Land Use	25%	Undergoing Validation	3%	None	0%
Top Buyers of North America-based Offset, 2013					
Buyer locations		Buyer Sectors*		Buyer Motivations*	
North America	96%	Other	41%	Corporate Social Responsibility	40%
		Retail Offset Market	16%	Climate-Driven Mission; To Combat Climate Change	25%
Europe	4%	Manufacturing	9%	Offset Resale	14%

Notes: Based on 5 MtCO₂e associated with either offset project or buyer location. Survey respondents may not answer every question pertaining to buyers – thus percentages pertaining to buyer sector and motivation may not be aligned.

*Few pre-compliance offset transaction responses reported buyer sector - thus findings in this column pertain primarily to purely voluntary buyers.

Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

“Given the disparity of prices between the compliance market and the voluntary market, all things being equal, people are going to be looking to develop projects under the compliance protocols,” said CAR President Gary Gero. “That said, we have been a little bit surprised – though very pleased — that projects have continued to develop and be verified under the voluntary market where prices have been low.”

North American prices were also pushed downward by the continued supply of a large volume of by-now-inexpensive landfill methane offsets as many buyers took a “portfolio approach” to their offsetting programs that involved mixing large volumes of low-priced offsets with more expensive offsets from project types such as forestry. About 1 MtCO₂e of forestry offsets – many of which were eligible for California’s compliance offset market – were nonetheless sold to North American voluntary buyers, partly because some developers found California’s compliance regulations too cumbersome and expensive to justify activities other than large IFM projects.

“It’s next to impossible to bring a reforestation credit into California. If you don’t have 3,000, 5,000, 10,000 acres of land, you can’t play in that game... it’s just not economically feasible,” observed Chandler Van Voorhis, Managing Partner of project developer GreenTrees. “California does not allow aggregation of lands and the compliance market does not go out long enough to match how trees grow. I think the only market for reforestation is voluntary.”

Diverging from previous years, North American developers did not conduct speculative pre-compliance deals because of the ARB’s slowness or outright reluctance to adopt new offset protocols. The ARB, for example, previously considered and ultimately rejected adding protocols for landfill methane capture or pneumatic valve replacements in the US oil and gas sector. California represented the last hope for landfill methane offsets that developers originally positioned for use under a US federal cap-and-trade program that never made it out the gate. As a result of ARB’s similar rejection, millions of these tonnes were unceremoniously dumped into the

voluntary markets, creating oversupply and depressing prices for these offsets and the market more broadly.

The ARB is contemplating the inclusion of rice cultivation projects, although board consideration and approval is unlikely to occur until the spring of 2015. In April 2014, the ARB also added coal mine methane capture to its roster of eligible protocols. But the uncertainty surrounding approvals for the program restrained actual project development in 2013. And while there is hope that the California program will be extended past 2020, political complications raise some doubts about that prospect and whether new projects would be economically viable over only a 5-year timeframe if the program expires as scheduled.

Market participants see opportunities for the ARB to add other land-based project types in the voluntary realm to its system, including avoided grassland conversion, wetland restoration, composting and rangeland management. The Sacramento Municipal Utility District, which launched a carbon offset program in 2007, partnered with ACR and other organizations to develop a protocol to measure emissions reductions from California deltaic and coastal wetland restoration projects. But while ARB officials are following the work being done by voluntary project developers to road test the wetland restoration and other protocols, they have not confirmed that the agency will consider adding any of these project types.

Some US-based project developers were hoping for a boost in market deals from proposed regulations for reducing carbon pollution from existing power plants released by the Environmental Protection Agency (EPA) on June 2, 2014. Those market participants that viewed such a development as “wishful thinking” were right. The EPA heeded calls to give state and regional cap-and-trade programs a compliance role, explicitly mentioning California’s cap-and-trade program and the Regional Greenhouse Gas Initiative (RGGI) trading program governing power plant emissions in nine Northeastern states as market-based programs whose emissions reductions would be approved under its guidelines. But the agency could not find a place for carbon offsets as a compliance mechanism in its proposal, meaning these states must be able to show they can hit the federal program’s targets without the use of offsets.

“I see that as a conservative choice on EPA’s part,” said William Shobe, an economist and professor at the University of Virginia who helped design the

original RGGI program. “It doesn’t want to have the whole program overturned by going out on a limb and allowing offsets in the program.”

North of the border, **Québec** and California officially linked their cap-and-trade programs via the Western Climate Initiative (WCI) in January 2014, with the first official joint auction of carbon allowances taking place in November. Demand for offsets under the Canadian province’s compliance program is expected to be low at first and ramp up after fuel distributors are folded into the program in 2015.

Ecosystem Marketplace tracked 185,000 tCO₂e of transactions in **British Columbia** – another WCI member jurisdiction – developed according to the Pacific Carbon Standard in 2013. But that business may not be repeated in 2014 because the provincial government decided in late 2013 to fold the Pacific Carbon Trust, a British Columbia Crown corporation tasked with administering the standard and sourcing offsets to meet the government’s carbon neutrality commitment and the developer of the standard.

Across both countries, North America’s voluntary buyers purchased 9.4 MtCO₂e, compared to the 29.6 MtCO₂e contracted in 2012. In part, this contraction reflects a significant shift of North America’s voluntary offset supply and demand to California’s compliance offset market. For the same reason, the total value attributed to North American buyers decreased 61% in 2013 to \$72 million.

Overall, the vast majority of voluntary offsets were sold to existing buyers in North America, with only about 250,000 tCO₂e transacted to new buyers. Even so, existing buyers included high-profile companies such as Microsoft, Walt Disney, and Chevrolet, all of which communicated very publicly the details of their offset programs throughout the year. Despite their influence, voluntary offset demand in the United States fell 76% to 4.8 MtCO₂e transacted in 2013, at a total value of approximately \$25 million. Canada experienced a steeper regression, with voluntary transactions declining 87% to 0.3 MtCO₂e and a total value just shy of \$5 million.

5.6 EU and Non-EU Europe: Domestic Programs Go Beyond Kyoto

European Union member states’ compliance obligations under the Kyoto Protocol for the most part preclude them from generating offsets for sale on the

voluntary market, but the EU remained the largest source of demand in 2013, purchasing more than two-thirds of offsets that reported a buyer. More than half of those offsets were sourced from Asia-based projects, 32% were from Africa and 15% were from Latin America.

EU buyers were behind a total of 28 MtCO₂e purchased, down significantly from 43.4 MtCO₂e in 2012. However, the value of regional demand stood at \$25 million, down just 5% from 2012, indicating that the price paid by European buyers remained at least relatively stable. This finding partly reflects European buyers' interest in projects with strong co-benefits, with 34% of offsets transacted to EU-based buyers from forestry projects and another 8% from household devices (renewables and energy efficiency projects composed the rest of Europe's demand).

"Definitely the focus here in Europe is on very social projects," said Giulio Berruti, Business Development Manager at France-based Eco-Act. "Carbon is a part of the impact, but [buyers] want to see social impacts."

For instance, insurance companies Allianz in **Germany** and Aviva in the **UK** made a strong showing in 2013 by purchasing offsets from charismatic projects in Asia and Africa. The Livelihoods Fund, a carbon investment fund of about \$46 million backed by nine major European companies including Danone, Credit Agricole, Hermes, and CDC Climat, is also providing some much-needed infusion finance to get early-stage projects off the ground.

Table 11: Europe by the Numbers, 2013
(all in MtCO₂e and USD\$)

	Total, 2013	% Change from 2012
Volume supplied	0.5 Mt	-69%
Average price	\$3.9/t	-91%
Value	\$2.6 M	-18%
Volume purchased domestically	28 Mt	-36%
Value of domestic purchases	\$254 M	

Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014.*

Though the Kyoto Protocol accounts for both CO₂ sources and sinks from land management and land use change, the UK and **Italy** are both generating small volumes of forest carbon offsets from activities that market participants consider 'additional' to national forest accounting. The UK's Woodland Carbon Code (WCC), launched in 2011 as a domestic voluntary carbon standard administered by the UK Forestry Commission, incentivizes woodland creation with long-term forest management plans. UK companies have been required to report their gross CO₂ emissions since April 2013, and the UK Department for Environment, Food and Rural Affairs allows companies to claim outlays to WCC projects against these totals – one of only two cases of a national government allowing voluntary offsetting claims against mandatory emissions reporting (the other being Japan).

The WCC Registry transitioned to Markit's platform in mid-2013 and listed over half a million Pending Issuance Units (PIUs) that represent future emissions reductions to date. These PIUs may be purchased by UK companies through forward sales, and will convert to Woodland Carbon Units (WCUs) once the trees grow and carbon sequestration is verified – a process that is expected to begin in 2016. However, some market participants are worried that mixing public and private finance may be distorting the market for WCUs.

Italian project developers are also generating forest carbon offsets for sale to public-sector buyers, including Trento province and the Veneto and Friuli-Venezia Giulia regions, that are looking to offset emissions beyond national obligations. The Nucleo Monitoraggio Carbonio, a group of project developers, public administrators, brokers, and buyers, convened in 2013 to develop an Italian Forest Code that would specify rules for forest carbon projects additional to Italy's Kyoto Protocol requirements.

"We are in a situation in which there is an overlapping of the regulated versus the voluntary markets, so there is the need to organize in a way to make sure that we are not monetizing twice the same credits," said Lucio Brotto, a PhD candidate at the University of Padova in Italy who is involved in developing the Code.

Outside of Kyoto obligations, projects based in non-EU Europe transacted 4 MtCO₂e last year, up slightly from 2012 but still representing only 6% of global market share. **Turkey**-based projects transacted just under 3 MtCO₂e, making the country the 8th largest

supplier of offsets to the voluntary market globally. A mix of wind, hydro, and landfill methane projects in Turkey transacted at an average price of \$4.4/tCO₂e for a total \$18.6 million in value.

As happens across the world, renewable energy projects in Turkey often use carbon offsets sales as an additional – though sometimes not the primary – source of revenue. As prices descend, however, it's the volume of offsets sold that really matters, explained Asli Ozcelik of Turkey-based Ekobil Environmental Services, so there is little incentive to develop high-quality projects. "On top of that, Turkish projects are having a hard time differentiating – [so much so] that very decent projects with extra benefits identified by additional standards are not able to find decent buyers," she said.

The other notable non-EU project location was **Russia**, which – bolstered by Dow Chemical Company's commitment to offset the 0.5 MtCO₂e carbon footprint of the Sochi Olympic Games – transacted more than half a million tonnes of offsets in 2013. The Russia-based Bikin Tiger REDD+ project saw some of this demand, as did energy efficiency projects in Russia, as well as Brazil and South Korea, which are slotted to host the next two Olympics. The Russian government toyed with the potential for an emissions trading system to help them meet its 25% below 1990 by 2020 target. Although the country's climate negotiator said such a program would likely not be ready before 2020, recently established guidelines for monitoring, reporting and verification offer some semblance of movement.

The voluntary carbon market in Europe continues to struggle with boiler room operations which typically sell carbon offsets – third-party verified or not – to individuals using high-pressure tactics and promising unrealistic financial returns. The UK government's Insolvency Service closed down 19 companies that duped more than 1,500 people out of \$38 million in 2013. Despite this progress, the region's offset suppliers express concern that these few unscrupulous participants may tarnish the standing of carbon markets overall through negative media coverage.

Still, May 2014 revisions to the British Standard PAS 2060, which specifies rules for UK companies, local governments, or other organizations to make carbon neutrality claims, set out 'principles' that carbon offsets should meet. VCS, The Gold Standard, and

CCB as well as WCC offsets and Kyoto-compliant ERUs and allowances all meet the guidelines. Though the standard does not allow organizations to make carbon neutral claims about their activities, products, services, or events based on offsetting alone, offsets can be a part of the strategy to reduce emissions after demonstrating a reduction in absolute or intensity emissions. The inclusion of voluntary standards on the list reflects confidence in improved market infrastructure and could open up UK demand. PAS 2060 is also used outside of the UK – for instance, by companies in Taiwan.

On the compliance side, 2013 began with prices in the EU ETS falling to a record low as the EU Parliament proposed to "backload" 900 million future permits to curb oversupply – a proposal the EU finally approved in February 2014. In March 2013, the UN's Joint Implementation Action Group shuttered its doors, citing the absence of any reason to believe that Emissions Reduction Units (ERUs, from CDM projects based in certain developed countries with transitioning economies) prices would rise to the 5-euro-per-tonne mark that would actually promote project activities. In October 2013, Norway's Ministry of Finance signed an agreement with the Nordic Environment Corporation to purchase up to 30 million CERs between 2013 and 2020 – a last lifeline in an attempt to lend "legitimacy" to the CDM, or its international carbon market successor.

5.7 Oceania: Setbacks Abound in the Outback

Oceania suffered a major setback, as Australia's government repealed the country's newly-minted carbon tax. New Zealand similarly faces challenges as the country maintained its compliance ETS, but voluntary project developers struggled to find buyers interested in New Zealand-based projects instead of less expensive international units.

Uncertainty looms over Oceania project developers and, accordingly, volume plunged by 94%. Yet those projects that did sell, sold well: the region maintained the highest average offset price of any locale at \$14.2/tCO₂e. These projects were almost exclusively forestry, split in thirds between tonnes pursuing certification under the CFI (30%), internal or proprietary methodologies (38%) and VCS (29%).

Australia's Liberal Party took control of the federal government after the 2013 elections, vowing to repeal the carbon pricing program that took effect in 2012. They succeeded in repealing the carbon tax earlier this

summer and adopted an “Emissions Reductions Fund” to replace it. The Fund will serve as a reverse auction for the government to buy from competing sellers.

In **New Zealand**, voluntary offset transactions plummeted by almost 100% in 2013. Forestry activities – the country’s primary project type – have not fared much better even in compliance markets.

New Zealand enacted the first compliance market to accept forestry offsets in 2008, but its ETS has been rife with problems since then. Most pressing is the use of international offsets. Compliance buyers simply buy inexpensive international offsets, driving New Zealand Units down from \$20/tCO₂e to as low as \$1.50/tCO₂e in 2013. The low prices under compliance markets make it nearly impossible to sell forestry projects under the government-administered Permanent Forest Sink Initiative (PFSI) and even more difficult to sell voluntary units locally.

In the midst of this turmoil, project developers hope to find voluntary local buyers who want to finance high-quality forestry projects, particularly in light of recent media coverage of New Zealand’s increasing emissions. Ollie Belton, Managing Director at Carbon Forest Services said: “In some ways because of the dysfunction of the compliance market, I am hoping and I’m starting to see more parties wanting to actually buy voluntarily because they are so unimpressed and disenchanting with the compliance market.” However, he only started seeing these trends in 2014 because, “last year was pretty much dead.”

Table 12: Oceania by the Numbers, 2013
(all in MtCO₂e and USD\$)

	Total, 2013	% Change from 2012
Volume supplied	0.4 Mt	-94%
Average price	\$14.2/t	+61%
Value	\$6.9 M	-90%
Volume purchased domestically	3 Mt	-39%

Source: Forest Trends’ Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

Elsewhere in the Pacific, small island developing states remain interested in offsets yet commonly lack capacity or scale to develop commercial projects. However, a few privately-funded projects may come online soon. As Sean Weaver of the Carbon Partnership said, the company had to get creative when working in the Pacific by developing a set of methodology modules that spans borders.

“We’re using Plan Vivo as the standard and Plan Vivo signaled that they were comfortable with us to run a grouped project across national borders,” he explained. “Partly because the Pacific region is so widely dispersed and the countries themselves are not very big – yet they desperately need tangible alternatives to logging and land clearance.”

6. Projections: Striking a New Balance

The voluntary carbon market is constantly evolving and adapting to changing circumstances. This means that a retrospective report such as this one cannot fully capture the swift policy, technical, and other fundamental shifts that occur from the time suppliers complete their transactions to the time they respond to this report survey and to the time this report is published. These rapid developments make it difficult to ground future projections for market performance on real-time carbon offset pricing.

Nevertheless, Ecosystem Marketplace once again asked suppliers to “guesstimate” market size for the current and future years. Their views provide valuable insight into what suppliers of voluntary carbon offsets expect of near- to long-term market performance.

6.1 Supplier-Reported Market Projections

Survey respondents predicted that the voluntary offset market will grow to 175 MtCO₂e in 2015 and 300 MtCO₂e in 2020 – a more tentative growth rate than they projected in last year’s survey – though they overestimated the size of last year’s market by 52%. They also project that 2014’s market will transact 138 MtCO₂e, which would require an 81% growth rate from

2013’s market size, valued at an additional \$302 million.

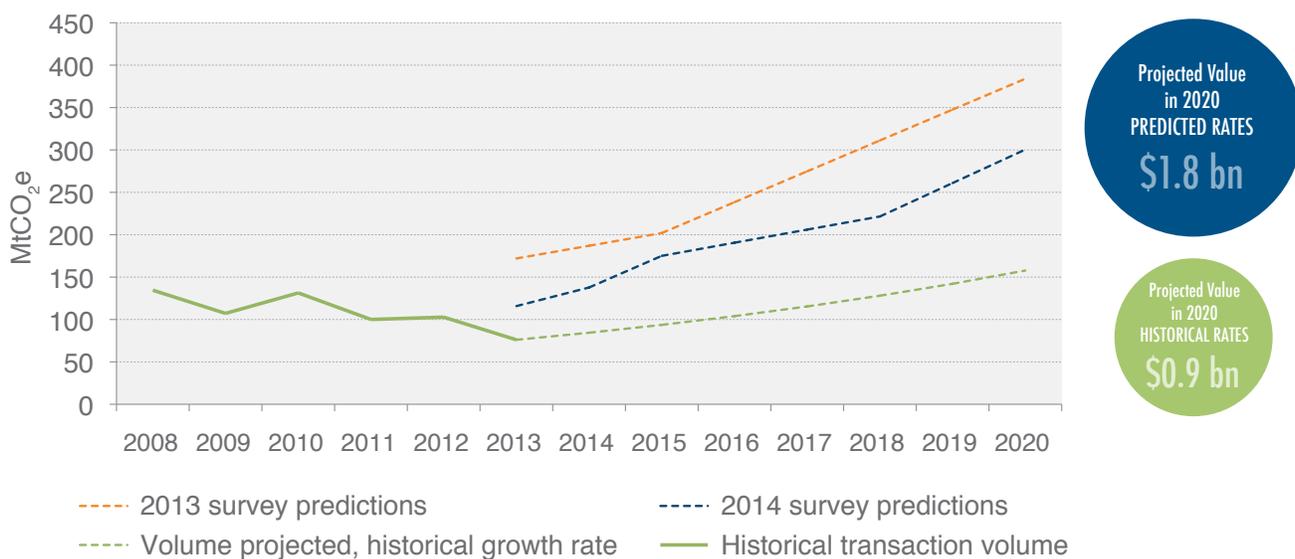
Based on the voluntary market’s historical average price of \$5.9/tCO₂e, suppliers’ predictions place market value at \$1.8 billion in 2020. This is roughly double the \$0.9 billion that would be required to sustain the market’s average historical growth rate (11%) over the same period.

6.2 Supplier Portfolios and Pipeline

Survey respondents reported that 31.8 MtCO₂e in their project portfolios remained unsold at the end of 2013. The majority of those tonnes (12.6 MtCO₂e or 43%) were reported by 36 suppliers that tried to but did not find a buyer by year’s end. Another 23% of unsold volume (7.1 MtCO₂e) was associated with three suppliers that plan to exit the market in 2014 due to insufficient demand.

At least 18 offset suppliers reported that they did not transact 6 MtCO₂e in 2013 because they were holding out for more favorable prices. Ten suppliers were still in negotiations with buyers at year’s end – thus their 3.6 MtCO₂e that remained unsold in 2013 will likely be reported as transactions in next year’s survey.

Figure 39: Market Projections, Historical Data, and Supplier Predictions



Notes: Based on responses from 156 offset suppliers active in 2013.

Source: Forest Trends' Ecosystem Marketplace. *Sharing the Stage: State of the Voluntary Carbon Markets 2014*.

In terms of projects' pipeline – representing the emissions reductions that could be generated and brought to market in the next five years if demand warrants project development – survey respondents reported a potential 277 MtCO₂e through 2018. The size of this pipeline has significantly reduced since last year, when project developers aimed to bring up to 1,440 MtCO₂e of offsets to market in the next five years under more favorable market conditions.

6.3 Looking Ahead: 2014 and Beyond

The public sector indisputably influenced the size of the voluntary carbon markets in 2013, as demonstrated by the Acre-KfW agreement. Developments in 2014 such as the expansion of the REDD+ Early Movers Program to Colombia and Ecuador indicate that this government-to-government agreement could be the beginning of a new trend – one that forces a reexamination of voluntary carbon finance, which until now has largely consisted of private-sector demand. Going forward, the concept of “payments for performance” for emissions reductions may become the umbrella under which “traditional” carbon offsetting is but one of many tools.

Alongside an expanding role for the public sector, the arrival and expansion of compliance carbon mitigation programs will likely continue to play a major role in shaping views of carbon offsetting. Some market participants view the introduction of compliance markets as a gateway to greater awareness of voluntary action that could spur an expansion of demand.

Indeed, there is evidence that voluntary and compliance markets may have a symbiotic relationship. European corporations remain the largest source of voluntary offset demand even in the presence of the EU ETS – an indication that a compliance carbon market may build corporate familiarity with offsetting and increase rather than cannibalize voluntary activities.

Given China's outsized role in the global economy, its implementation of seven pilot emissions trading systems within 18 months and its efforts to incorporate carbon offsets have given some market participants hope that carbon pricing could make a difference in forestalling catastrophic climate change. Likewise, California's dedication to developing and implementing its cap-and-trade program – complete with its offset program – also bodes well for the future of the global markets.

Notwithstanding delays, South Africa continues to pursue a carbon tax program that carves out a strong role for carbon offsets developed in the voluntary carbon markets – in yet another nod toward the crucial role the voluntary markets play in setting the stage for the rise of compliance programs. However, Australia's abandonment of its carbon pricing program – largely propelled by political ideology and misconceptions about carbon pricing – sends a discouraging message to market participants that hope for clear price signals and durable policy.

While some national and sub-national jurisdictions are dedicated to carbon pricing in the absence of a global approach to the climate problem, the tenuous nature of some of these programs creates exactly the type of uncertainty that businesses strive to avoid. Offset suppliers seek strong policy signals at the international level from the UNFCCC process or from planned national programs in China, South Korea or South Africa or from subnational jurisdictions such as California and Québec. But it is difficult for margin-challenged companies to bet their futures on such outcomes, and public entities face significant difficulty finding the will and sufficient financing to address climate change.

This means that for demand for third-party emissions reductions to grow in the near-term, the private sector must participate in a more robust and concerted manner. As is, suppliers reported transacting a small number of offsets – a mere 4% of total demand – to new buyers in 2013, indicating that they are mostly relying on the same, limited buyer pool for demand.

Campaigns such as Code REDD have worked to raise the visibility of offsetting, with a focus on charismatic projects that reduce deforestation. The group is now expanding its work beyond corporate partners and plans to launch a “Do a tonne of good” campaign in early 2015, complete with a mobile website that aims to make offsetting accessible to individuals. Efforts to offset major events such as the 2014 World Cup have also served to mainstream the concept of offsetting.

Offset project developers and their investors are beginning to understand that they must promote the value of offsets to the private sector, not just as one-off purchases, but perhaps as part of a comprehensive strategy to mitigate the risks that an ever-changing climate poses to their business operations and customer bases. Such marketing efforts could set the stage for a shift in buyer motivations that drives increasing interest and demand in tomorrow's voluntary carbon markets.

ANNEX 1: Offset Supplier Directory

Note that this directory includes only those organizations who responded to our 2014 voluntary carbon survey and indicated that they wished to be listed.

Offset Supplier	Website
2050 Consulting	www.2050.se
3Degrees	www.3degreesinc.com
A2G Climate Partners	www.atwog.com/
Agrigeorgia	www.ferrero.com/fc-885/
AGRINERGY PTE LTD	www.agrinergergy.com
ALLCOT Group	www.allcot.com
American Carbon Registry	www.americancarbonregistry.org
An Meá	www.anmea.com
Anthrotect	www.anthrotect.com
Asociación para la Investigación y el Desarrollo Integral - AIDER	www.aider.com.pe
Atlântica Simbios Environmental Consulting and Services Ltd.	www.atlanticasimbios.com
Auscarbon Pty Ltd	www.auscarbongroup.com
Australian Carbon Traders Pty Ltd	www.australiancarbontraders.com
BaumInvest GmbH & Co KG	www.bauminvest.de
Beyond Neutral	www.beyondneutral.com
BioCarbon Group	www.biocarbongroup.com
Biofilica Environmental Investments	www.biofilica.com.br
Bischoff & Ditzel Energy	www.bd-energy.com
Blue Source, LLC	www.bluesource.com
Bosques Sostenibles	www.bosquessostenibles.com
BP Target Neutral	www.bptargetneutral.com
CAMLICA ENERGY GENERATION Co Inc.	www.akfenenerji.com.tr
Carbon Advantage	www.carbon-advantage.com.au
Carbon Africa	www.carbonafrica.co.ke
Carbon Clear	www.carbon-clear.com
Carbon Credit Capital	www.carboncreditcapital.com
Carbon Footprint Ltd	www.carbonfootprint.com
Carbon Forest Services Ltd	www.carbonforestservices.co.nz
Carbon Manna Africa	www.carbonmannafrica.com
Carbon Tanzania	www.carbontanzania.com

Offset Supplier	Website
carboneutral SA	www.carboneutral.cl
Carbonfund.org Foundation, Inc.	www.carbonfund.org
CarbonSinkGroup S.r.l	
CARBONyatra	www.carbonyatra.com
Cassinia Environmental	www.cassinia.com
Centre for Research in Environment Kenya	www.creek-kenya.org
CEPRODER APURIMAC	www.geocieties.ws/ceproderapurimac
Ceres EnvE	www.ceres-tr.com
CERPD	www.cerpd.com
CF Partners	www.cf-partners.com
City of Arcata	Cityofarcata.org
Clean Air Action Corp	TIST.org
Climate Bridge Ltd.	www.climatebridge.com
Climate Clean, Inc.	www.climateclean.com
Climate Friendly	www.climatefriendly.com
Climate Neutral Group B.V	climateneutralgroup.com/en/
Climate Trust	www.climatetrust.org
ClimateCare Limited	www.climatecare.org
ClimatePartner	www.climatepartner.com
ClimeCo America Corporation	www.climeco.com
CLP Wind Farms (India) Private Limited	www.clpindia.in
C-O2 Consultores y Asesores	www.c-o2.org
CO2balance UK Ltd	www.co2balance.com
CO2OL / Forest Finance Service GmbH	www.co2ol.de
COFIDE	www.cofide.com.pe
COLBUN S.A.	www.colbun.cl
Community Forests International	www.forestsinternational.org
Compensation International Progress S.A.	www.ciprogress.com
Conch Aid	www.conchaid.com
Cool Planet	www.coolplanet.com.au
Cooperativa AMBIO	www.ambio.org.mx
COSPE	www.cospe.org
C-Quest Capital LLC	cquestcapital.com
Credible Carbon	www.crediblecarbon.com
DelAguaHealth Rwanda	www.delaguahealth.com/

Offset Supplier	Website
E+Carbon	www.epluscarbon.com
Eco2librium	www.eco2librium.net
EcoAct	www.eco-act.com
Ecocert	ecocert.com
Ecoinvest	www.ecoinvestservices.com
Ecomapuá Conservação Ltda.	www.ecomapua.com.br/home_ingles.html
EcoPlanet Bamboo	www.ecoplanetbamboo.com
Ecoprogresso	www.ecoprogresso.pt/
EcoServices Consulting Co., Ltd.	www.ecoservicesi.com
Ecosystem Services LLC	www.ecosystemservicesllc.com
Ecotierra	www.ecotierra.co
EKO Asset Management Partners	www.ekoamp.com
Ekobil Environmental Services and Consultancy Ltd.	www.ekobil.com
Emergent Ventures International (EVI)	www.emergent-ventures.com
ENCEV ENERJİ ÇEVRE YATIRIMLARI VE DAN. A.Ş	www.encev.com.tr
Energy Mad	www.energymad.com
Envirofit International	www.envirofit.org
Enviro-Mark Solutions Ltd	www.carbonzero.co.nz
Environmental Attribute Advisors	www.enviadvi.com
Environmental Credit Corp.	www.envcc.com
EOS Climate	www.eosclimate.com
EPIXSOLAR	www.epixsolar.kbo.co.ke
EQAO	www.eqao.com
Evolution Markets	www.evomarkets.com
Face the Future	www.facethefuture.com
Fair Recycling Foundation	www.fair-recycling.com
FairClimateFund	www.fairclimatefund.nl
First Climate	www.firstclimate.com/
Forest Carbon Group	www.forestcarbongroup.de
Funbio	www.funbio.org.br
Fundação Amazonas Sustentável	www.fas-amazonas.org
FutureCamp Climate GmbH	future-camp.de/?locale=en_US
Genneia S.A.	www.genneia.com.ar
GERES - CO2Solidaire	www.co2solidaire.org
GFA Consulting Group	www.gfa-group.de

Offset Supplier	Website
Globalbda	www.stoveproject.com
GREEN EVOLUTION SA	www.green-evolution.eu
Green Farm	www.greenfarmco2free.com.br
Green Resources	www.greenresources.no
Greenbank Environmental	www.green-bank.com.au
Greenfleet	www.greenfleet.com.au
Greenoxx	www.greenoxx.com
GreenTrees, LLC	www.green-trees.com
GTE CARBON TRADING	www.gtecarbon.com
Hidroluz Centrais Eléctricas	www.hidroluzpch.com
Hivos Foundation	www.hivos.org
IMEI Consultoria - Brasil Mata Viva Standard	www.brasilmataviva.com.br
Impact Carbon	www.impactcarbon.org
Innovative Carbon Investment Co., Ltd.	www.innovativecarbon.com.cn/
Jain Plantation	
lavola	www.clean-co2.com
Less Emissions	www.less.ca
Livelihoods Fund	www.livelihoods.eu
LMS Energy	www.lms.com.au
Logicor (Group) Ltd	www.logicor.co.uk
Love the World	www.lovetheworld.com
Mavi Consultants	www.maviconsultants.com
Maya Nut Institute	www.MayaNutInstitute.org
MÉXICO2 - Plataforma Mexicana de Carbono	www.mexico2.com.mx
Microsol	www.microsol-int.com
Mikro-Tek Inc.	www.mikro-tek.com
Mountain Association for Community Economic Development	www.maced.org
Mozambique Carbon Initiatives LDA	www.mozcarbon.co.mz
myclimate	www.myclimate.org
National Biodigester Programme-Cambodia	www.nbp.org.kh
NativeEnergy, Inc.	www.nativeenergy.com
Natural Balance - Wonderbag	www.nb-wonderbag.com
Nedbank Capital	www.nedbankcapital.co.za
Nexus Carbon for Development Ltd.	www.nexus-c4d.org
Nishant Bioenergy P Ltd	www.nishantbioenergy.com

Offset Supplier	Website
Numerco	www.numerco.com
Oceanium	www.oceaniumdakar.org/
Offsetters Climate Solutions	www.offsetters.ca
Orbis Development Partners	www.orbisdp.com
OSSEDI Malawi	www.ossedimwebbs.com
Pacific Hydro Chacayes	www.pacifichydro.cl
Permanent Forests NZ Limited	www.permanentforests.com
Peru Carbon Fund	www.perucarbonfund.com
Plan Vivo Foundation	www.planvivo.org
PrimaKlima -weltweit-	www.prima-klima-weltweit.de
Pronatura Mexico A.C.	www.pronatura.org.mx
Proyecto Mirador	www.proyectomirador.org/
R.Tarraubella & Asoc.	www.bonosdecarbono.com.ar
Recast Energy	www.recastenergy.com
Regione Friuli Venezia Giulia, Regione Veneto	www.regione.fvg.it
SCS Global Services	www.scsglobalservices.com
Shan Shui Conservation Center	www.shanshui.org
Sigma Global	www.sigmaglobalcompany.com
Sindicatum Sustainable Resources	www.sindicatum.com
SKG SANGHA	www.skgsangha.org
SLOW LIFE Foundation	www.slowlifefoundation.org
Smith Gardner, Inc.	smithgardnerinc.com
Sustainable Carbon	www.sustainablecarbon.com
SZ Consultancy Services Limited	www.szbd.info
Taking Root	www.takingroot.org
TaTEDO	www.tatedo.org
Terra Global Capital, LLC	www.terraglobalcapital.com
Terraprima	www.terraprima.pt
The CarbonNeutral Company	www.carbonneutral.com/
The Cochabamba Project	www.cochabamba.coop
The Conservation Fund	www.conservationfund.org
The Nature Conservancy	www.nature.org
The Paradigm Project	www.theparadigmproject.org
The Trust for Public Land	www.tol.org
Think Green	www.facebook.com/thinkgreen.org

Offset Supplier	Website
Tierra Resources LLC	www.tierraresourcesllc.com
Top Third Ventures	www.topthirdventures.com
Treecreds	www.treecreds.com
Treedom	www.treedom.net/en
Turbococina	www.turbococina.org
Turkuaz Karbon Varlik Yonetimi Enerji Proje Ltd Sti	www.turkuazkarbon.com
UNIQUE forestry and land use GmbH	www.unique-forst.de/v2/index.php?lang=en
UpEnergy	upenergygroup.com
Uyoolche AC	www.uyoolche.org
Verus Carbon Neutral	www.verus-co2.com
W. M. Beaty & Associates, Inc.	www.wmbeaty.com
WeAct Pty Ltd	www.weact.com.au
Wildlife Works	www.wildlifeworks.com
Will Solutions	www.solutionswill.com
Woodland Trust	www.woodlandtrust.org.uk
Yorkshire Dales Millennium Trust	www.ydmt.org

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EcoAct (www.eco-act.com), a major carbon strategy company, offers thorough consulting expertise to organizations wishing to develop their environmental approaches, reduce their environmental footprints, anticipate regulatory developments or lessen their dependency to fossil fuels.

The firm brings clients its expertise at each step in the process, from quantifying environmental footprints – through tools such as GHG Protocol, Life Cycle Analysis for products and services and Energy Performance Diagnosis – and water footprints to recommending, implementing and finalizing emissions reductions. EcoAct offers Clean Development Mechanism/Joint Implementation expertise for custom-made carbon strategies and provides dedicated consulting services on offsetting programs with a human dimension, carefully selected for their environmental and economic benefits, and most importantly, their positive social impacts.

EcoAct's in-depth knowledge of eligible programs is supported by its presence in Europe, Latin America, Africa and its network of experts in Asia. With an eye toward maintaining a quality sustainable development approach, EcoAct's services meet high standards and certifications, and the firm has committed to the ICROA Charter for voluntary carbon offsetting.



SCX - Santiago Climate Exchange (www.scx.cl) aim is to redefine climate change mitigation and adaptation as a source of corporate competitiveness and social and environmental inclusiveness.

SCX offers prime CO₂ Neutral certification for products & services differentiation and works with organizations looking to link their climate engagement with their core business – not relying solely on CSR policies. SCX specialists have been active players in Chile and the LATAM region's discussions regarding baseline scenarios for climate change, cap-and-trade options, green taxes, and market instruments for environmental regulation.

SCX was founded by ten leading corporate players in Chile, with the aim to develop new business models that foster green investment and sustainability practices in the country and the rest of the Latin American region. Today, SCX is an active catalyst for innovations that change the paradigm of climate change as a source of costs into a more proactive one where public awareness is translated into opportunities for local development. Thus, SCX seeks to become the Latin American hub for ecosystem market building rather than a platform limited to traditional exchange.



The Family of Forest Trends Initiatives

Ecosystem Marketplace

A global platform for transparent information on ecosystem service payments and markets

Water Initiative

Protecting watershed services through markets and incentives that complement conventional management

Forest Trade & Finance

Bringing sustainability to trade and financial investments in the global market for forest products

BBOP

Business and Biodiversity Offsets Program, developing, testing and supporting best practice in biodiversity offsets

the katoomba group

Building capacity for local communities and governments to engage in emerging environmental markets

Communities and Markets

Supporting local communities to make informed decisions regarding their participation in environmental markets, strengthening their territorial rights



Using innovative financing to promote the conservation of coastal and marine ecosystem services

Public-Private Co-Finance Initiative

Creating innovative, integrated, and efficient financing to support the transition to low emissions and zero deforestation land use

Learn more about our programs at www.forest-trends.org