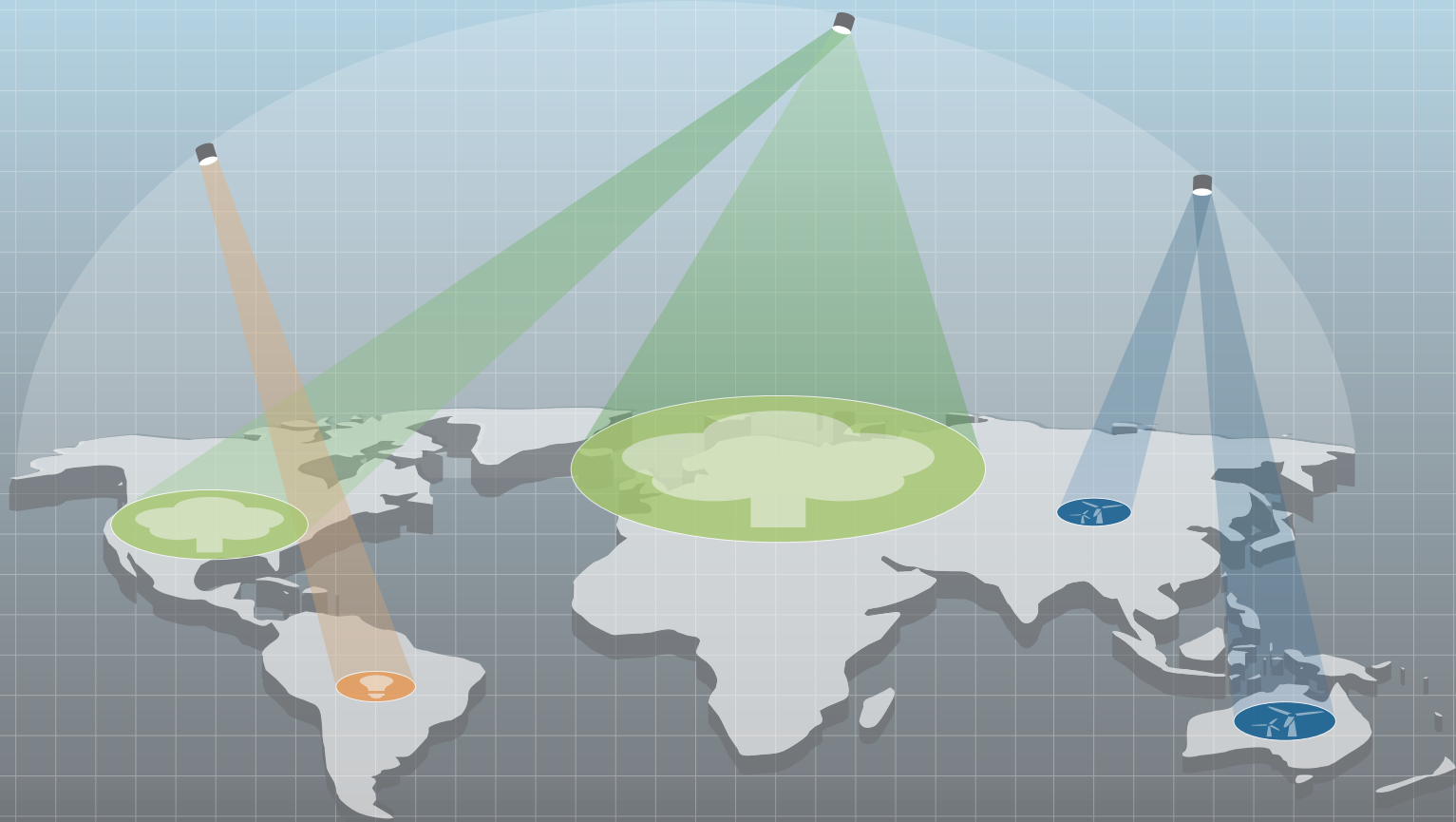




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Sharing the Stage

State of the Voluntary Carbon Markets 2014

Executive Summary

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Forest Trends analyzes strategic market and policy issues, catalyzes connections between producers, communities and investors, and develops new financial tools to help markets work for conservation and people.

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Executive Summary

A Report by Forest Trends' Ecosystem Marketplace

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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.

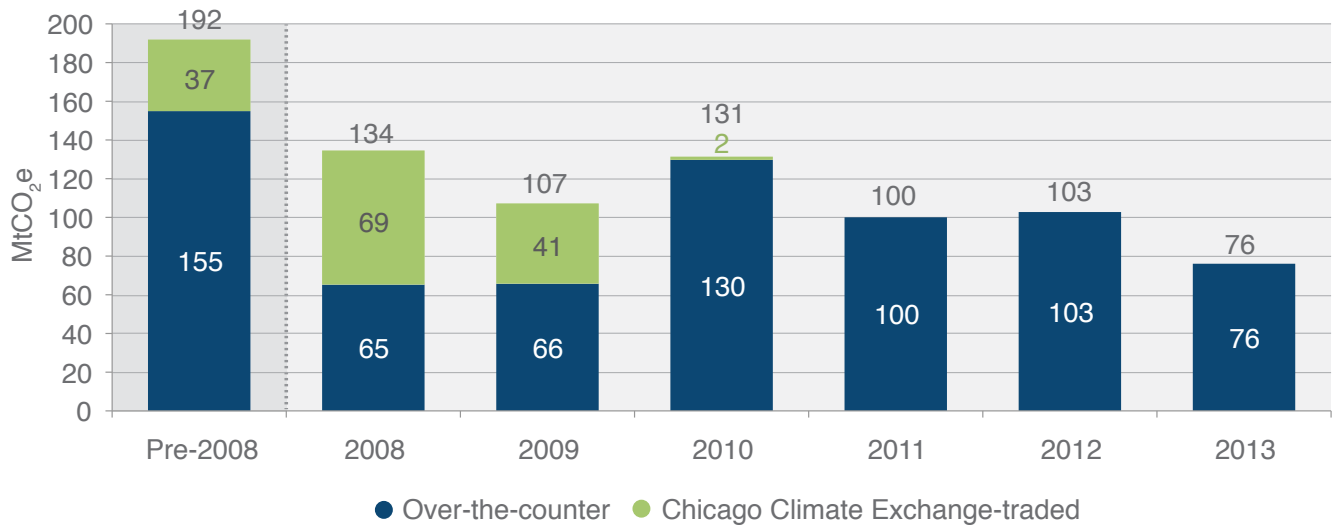
This report tells the story of voluntary carbon offsetting in 2013, but behind the facts and figures are the hundreds of individual transactions between buyers and sellers. Some of these buyers and sellers may never meet each other, but others do – such as a shipping representative from Singapore who 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 that worked through the voluntary offset market to shape regulation design.

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

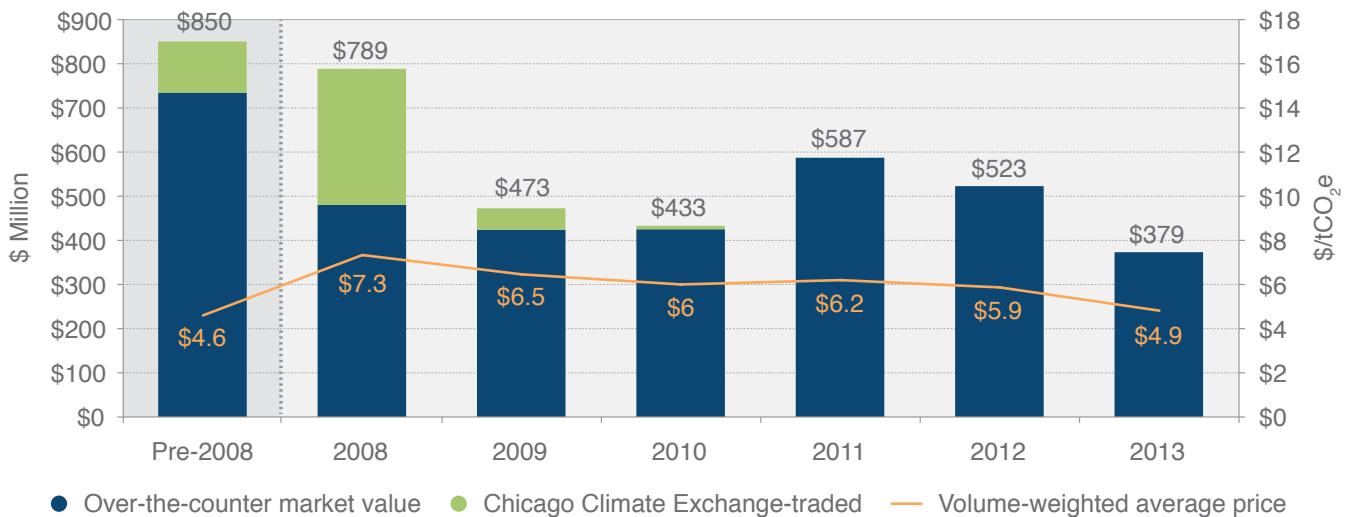
Figure 1: Historical Market-Wide Voluntary Offset Transaction Volumes



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*.

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 government-to-government carbon payments beyond the scope of traditional United Nations processes;

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*.

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

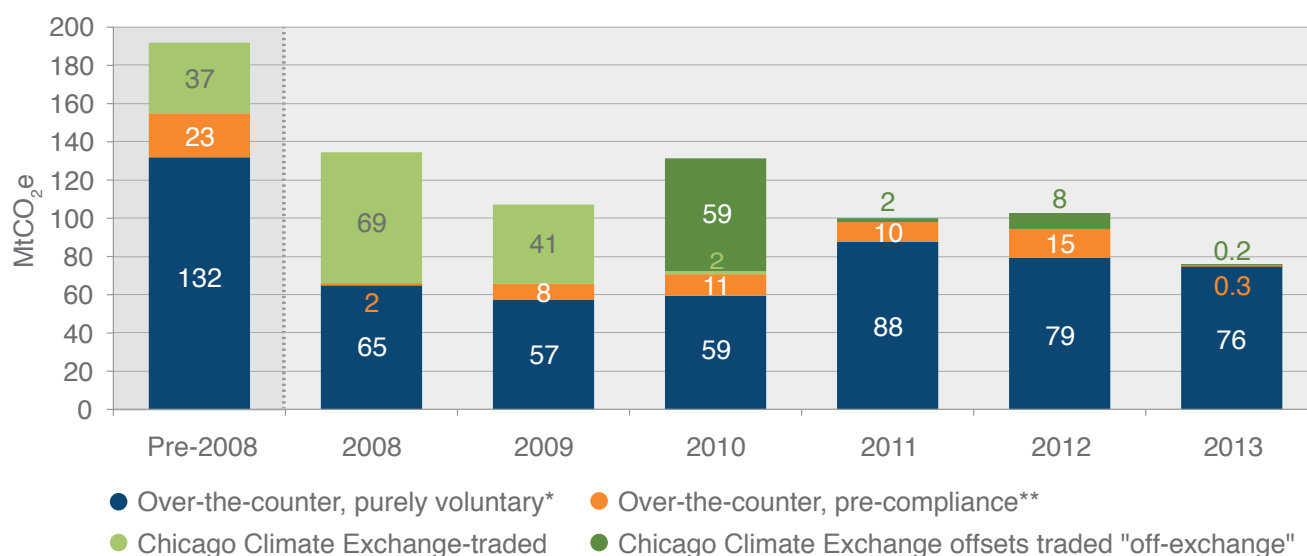
Following several years marked by only slight variations in voluntary demand, offset suppliers reported a sharp decline in both market size and average price in 2013. Last year, the market contracted⁴ 76 MtCO₂e of carbon offsets for immediate or future delivery. As such, the global voluntary offset market size shrank by 26% (from 102.8 million tonnes)⁵ to pre-2008 levels.

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.

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.

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*.

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/

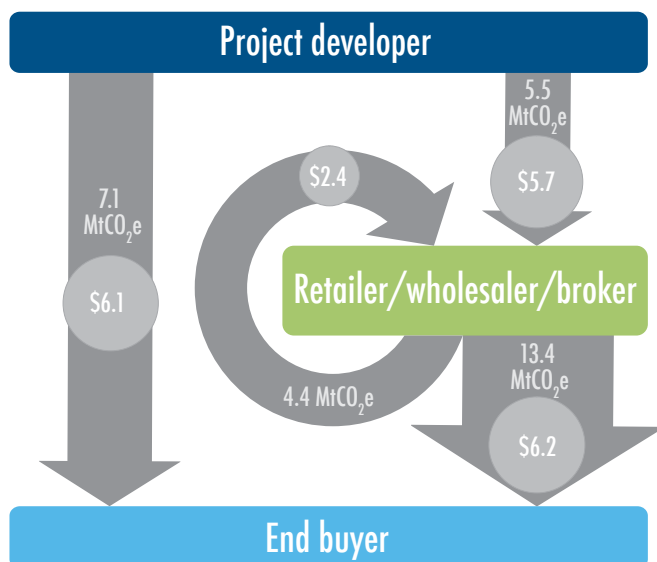
tCO₂e in 2012. Global market value tracked alongside these falling prices in 2013, to total \$379 million. Down 28% from 2012's \$523 million market, last year's value is comparable to levels tracked in 2007 – a year one supplier described as the eve of “climate-relevant” carbon market activity.

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 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 United Nations' 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

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 (MtCO₂e and \$/tCO₂e)



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*.

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 developer 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

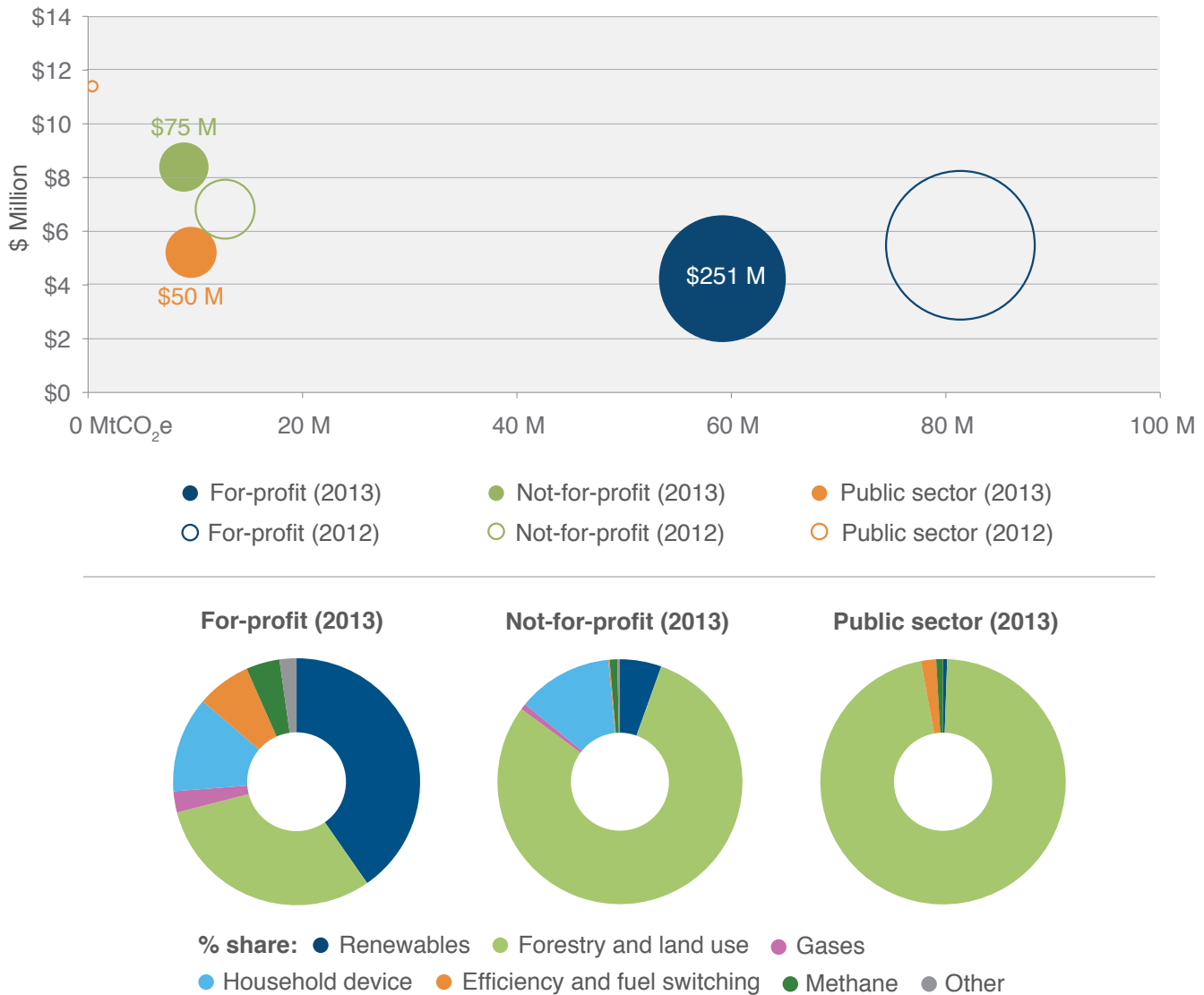
Even excluding this agreement, public sector suppliers and buyers together accounted for 3.4 MtCO₂e in transactional activity in 2013, up from 2 MtCO₂e in the prior year. Public programs represented in this year's data ranged from the Korea and Japan Verified Emissions Reduction programs (K-VER and J-VER); 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

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*.

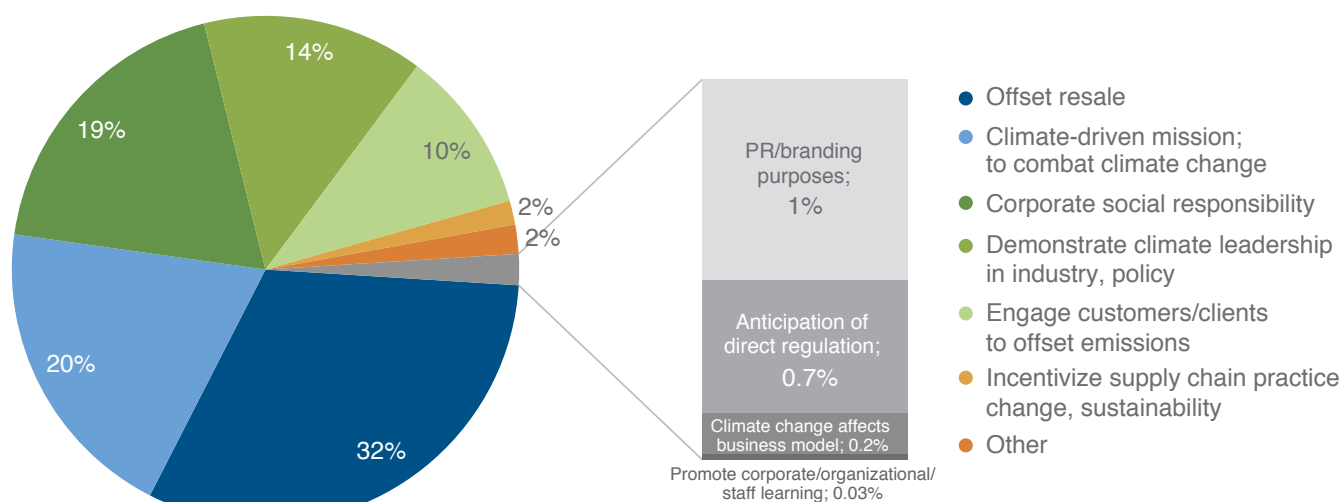
(20.3 MtCO₂e), small- to medium-sized enterprises (9 MtCO₂e), and domestic companies (6.2 MtCO₂e). Developing country-based buyers were most likely to buy from projects in their country and to seek offsets from forestry. Brazilian cosmetics company Natura's support to the Paiter Suruí people is one such 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

Figure 7: Market Share by Buyer Motivation, 2013 (% Share)



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*.

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.

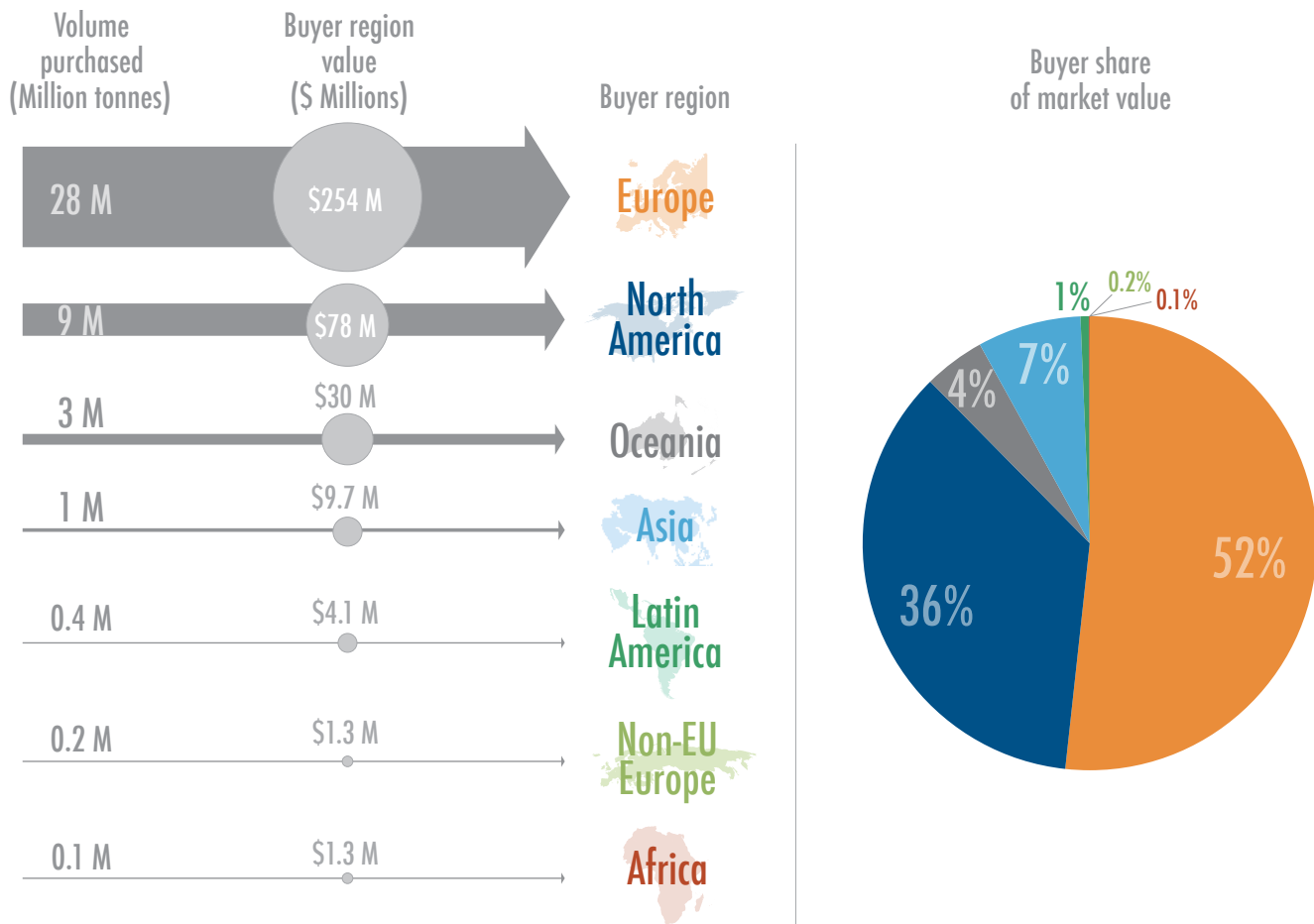
As in previous years, offset resale was the single most prominent motivation. Accounting for the full value of the flow of products through offset retailers in 2013, these actors collectively supported the transaction of 33.3 MtCO₂e or 44% of total market size by volume. As a buyer, they purchased/sourced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

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*.

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

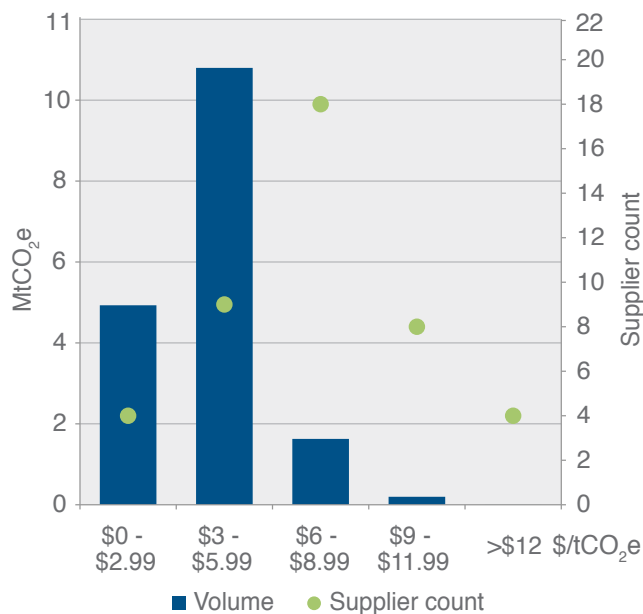
Suppliers have existing buyers to thank for continued market activity – current client demand was behind 76% of transacted volumes in 2013. First-time buyers like KfW made up the remaining 24%. Excluding the KfW/Acre state transaction from the analysis paints a more sobering picture for traditional market 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 project developers conceded to buyer demands

Figure 9: REDD+ Offset Transacted Volume and Supplier Count by Price Range (MtCO₂e and Count of Suppliers)



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*.

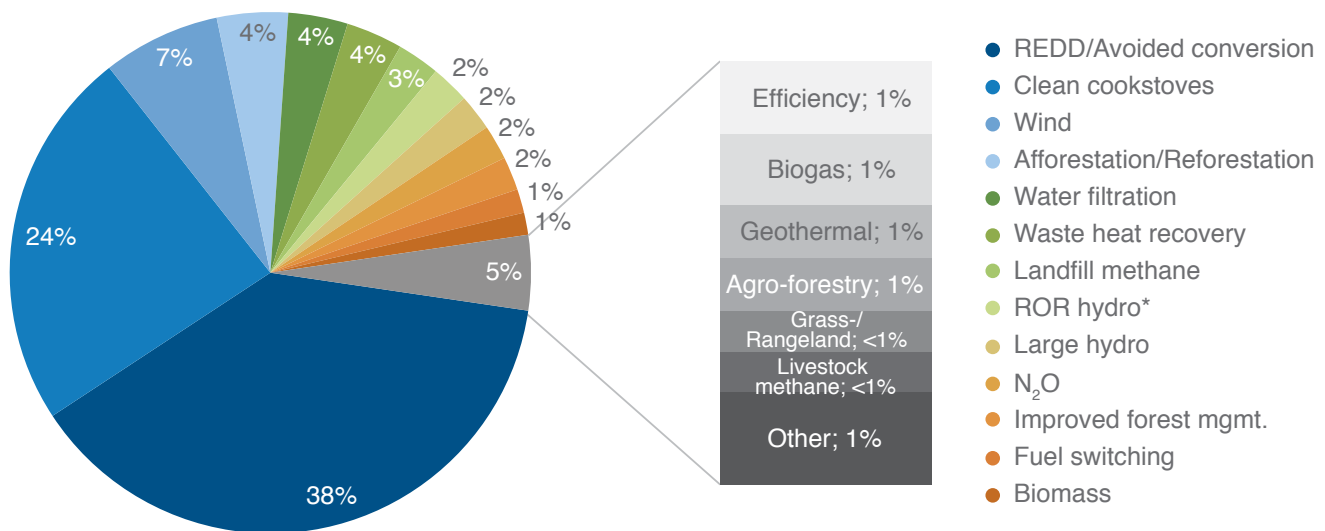
and dropped their previously above-average prices. Because demand for forestry offsets is significantly sensitive to changes in price,⁸ the voluntary forest carbon markets in turn surpassed 2012's sizable transaction volume⁹ to total 27 MtCO₂e.

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

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*.

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.

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.

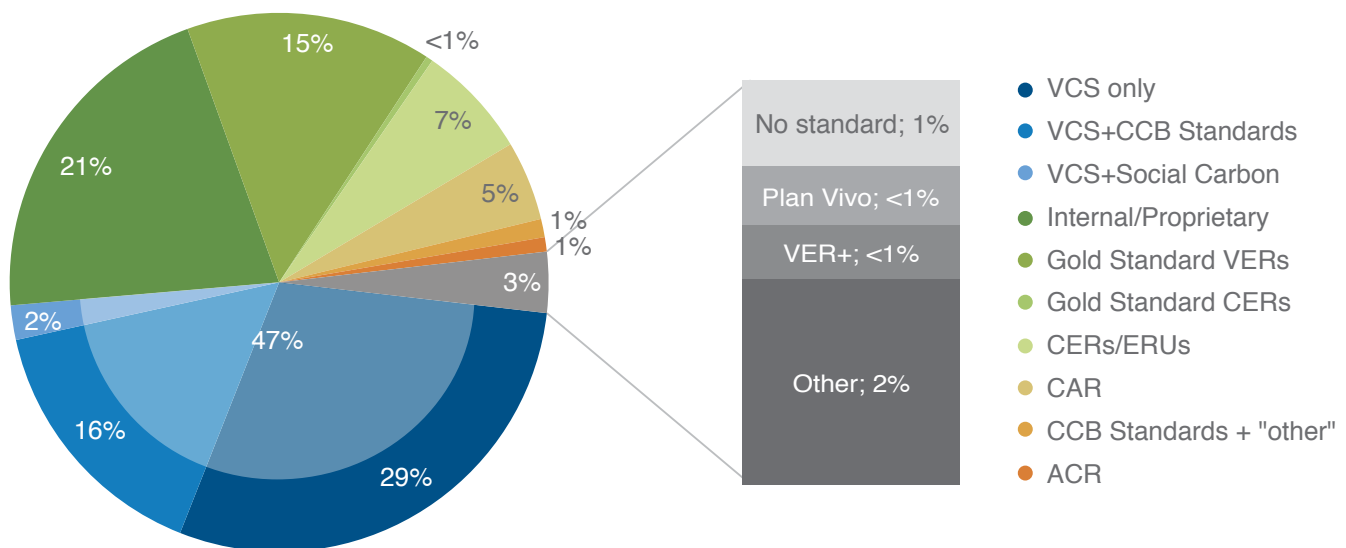
Proprietary Standards Re-Engage while Independent Standards Hold on to Lead

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

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*.

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 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.

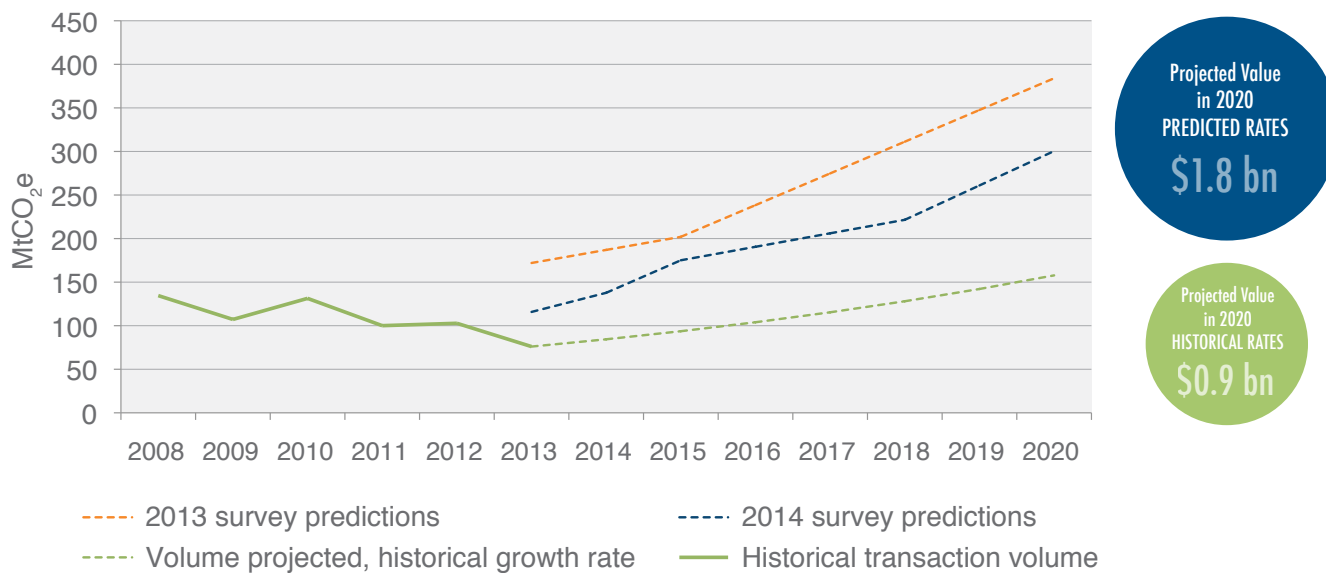
Projects in India and China were the most common Asian offset sources, primarily due to their abundant stocks of inexpensive renewable energy offsets. Elsewhere in the region, buyers and their suppliers paid increasing attention to Asia's forestry and energy efficiency projects – driving market growth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

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*.

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 (3 MtCO₂e). 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.

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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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.



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