

A man wearing a grey t-shirt, a baseball cap, and jeans with keys on his belt stands in a banana plantation. He is looking off to the side. Large bunches of green bananas are visible in the background.

Gold Standard®



GOLD STANDARD

Market Report

Annual Review 2016

Gold Standard®

Climate Security & Sustainable Development

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Gold Standard works to catalyse more ambitious action for climate security and sustainable development. Our robust standard, Gold Standard for the Global Goals, enables activities that protect the climate and empower local communities to maximise, quantify, and verify their impacts.

Gold Standard was established in 2003 by WWF and other international NGOs as a best practice standard to ensure projects that reduced carbon emissions under the UN's Clean Development Mechanism (CDM) also delivered on the dual mandate to foster sustainable development. Now with more than 80 NGO supporters and 1400+ projects in over 70 countries, Gold Standard projects have created billions of dollars of shared value from climate and development action worldwide.

✉ info@goldstandard.org

☎ +41 (0) 22 788 7080

🐦 @cdmgoldstandard

Chemin de Balexert 7-9

1219 Châtelaine

International Environment House 2

SWITZERLAND



INTRODUCTION

About this report

This report is a response to feedback we received from our Transparency Initiative, launched in 2015 as a way to increase confidence and participation in carbon markets, and aims to improve access to market information for planning and decision-making.

Published quarterly, the report provides up-to-date issuance and retirement data for Gold Standard emissions reduction projects. It also features information and articles that help build clarity around the complexities of the market, especially in regards to pricing and how it varies from project to project.

We hope you find this report insightful and we welcome any comments or feedback to help us continue improving.

info@goldstandard.org





GOLD STANDARD MARKET REPORT

A time of transition

We are pleased to share this Gold Standard Market Assessment, which reflects continued challenges with a spirit of mid-term optimism during this time of transition. Encouraging signs have emerged following the 2015 Paris Agreement:

- » Article 6 making clear provisions for market measures.
- » Over half of countries indicate plans to use market-based mechanisms to meet targets in their Nationally Determined Conditions (NDCs).
- » Countries like South Africa and Colombia have already indicated recognition of Gold Standard verified emissions reductions (VERs) in their compliance schemes.

There is also evidence that the private sector is picking up momentum in support of market mechanisms. Business leaders made a strong statement through a joint statement in the Marrakech Business Declaration for the Global Action Agenda:

“Business calls for robust and complementary carbon pricing mechanisms ... to redirect investments towards low carbon solutions. Coherent regulations between national and regional carbon markets and alignment between the various systems with clear global rules aiming for a global coverage will prevent economic distortions and carbon leakage.”

Over 1,000 companies now use an internal price on carbon, showing increasing corporate carbon pricing and carbon programs. CORSIA, the aviation sector's global market based mechanism, will commit to carbon neutral growth for international flights starting in 2021 and is estimated to generate demand between 288 MtCO₂e and 376 MtCO₂e by 2030, while also raising the possibility of nearer term, pre-compliance demand from airlines. Other high notes include Colonial Bourses posting a record trading month in December 2016 after the re-launch of voluntary credits on their platform and reports from market makers of new corporate offsetters.

Among these positive signals, the effects on the voluntary market appear deferred, as the real-world implications of political agreements are defined and as corporate players refine their climate strategies accordingly. Volumes of Gold Standard VER retirements and issuances have held relatively steady compared to 2015, but still favour higher supply relative to demand.

Measures Gold Standard is taking to address this imbalance include introducing a Renewable Energy Certificate (REC) label that projects can transition to in order to meet increasing demand in REC markets, thereby decreasing supply of renewable energy projects. This work is supported by Southpole Group. On the demand side, a key focus is to define best practice corporate climate action that includes financing climate protection projects through VER purchases. These recommendations are being refined among Gold Standard and the partners of the Science Based Targets initiative and will be shared broadly later in 2017.

As always, we thank our stakeholders for continuing to champion Gold Standard and to work toward 'climate security and sustainable development for all.'

Marion Verles
CEO, Gold Standard





UNOPS made the strategic decision to ensure their carbon offsetting also contributed to the UN's Sustainable Development Goals by committing to 100% Gold Standard to offset their 2015 operations.

"The Gold Standard is the most stringent standard for carbon offsets, ensuring that climate finance delivers both emission reductions and long-term sustainable development outcomes."

Source: UNOPS January 2017 newsletter



BEYOND CARBON NEUTRAL

Q&A: How Microsoft is driving impacts on the ground

Tamara "TJ" Dicaprio

Sr. Director, Environmental Sustainability
Microsoft Corporation

Can you give us an overview of Microsoft's climate strategy?

At Microsoft, we are committed to taking significant action to address climate change. We have taken a number of steps to manage our environmental footprint, perhaps most notably through our carbon program. Since 2012, our commitment to carbon neutrality and our carbon fee model have helped us ensure that we responsibly manage the direct carbon (or climate) impact of our business.

However, our commitment does not

end there. While we are addressing the carbon impact of our operations and cloud services, we are also embracing the potential to use our technology—in particular our cloud services—to help individuals, organizations, and communities in the global transition to a low-carbon economy.

Since July 2012, we have operated at 100 percent carbon neutrality—or climate neutrality¹—for all of our operations, including our datacenters, offices, software development labs, manufacturing plants, and business air travel. As we pursue sustainable operations, we aspire to:

- » **Be lean**—reduce energy consumption and travel.
- » **Be green**—make environmentally responsible choices with our renewable electricity and carbon credit procurement.
- » **Be accountable**—quantify and hold groups responsible for carbon impact.

Our carbon neutral commitment, together with a focus on being lean, green, and accountable in our operations, enables us to operate responsibly and grow sustainably.²

1. Read the [UNFCCC Climate Neutral Now press release](#) to learn more about this initiative.

2. Download our white paper ["Becoming carbon neutral:](#)

Our carbon neutral commitment is underpinned by an internal carbon fee, one of the first of its kind,³ that holds our business units financially accountable for the emissions from their operations, including energy consumption and air travel. We earmark the funds that we collect through the carbon fee for emissions reduction and climate protection initiatives.⁴ Our carbon fee plays a pivotal role in our carbon program.

We use the carbon fee funds in four investment categories:

- » **Renewable energy**—helping to expand the renewable energy market worldwide.
- » **Carbon offset community projects**—supporting sustainable development globally, in particular in the areas of our datacenter operations.
- » **Climate Grants**—driving climate-related energy and technology innovation.
- » **Track-and-report projects**—helping to ensure our transparency and accountability.

Since making our carbon neutral commitment, we have reduced carbon emissions by more than 9 million metric tons of carbon dioxide equivalent (mtCO₂e).

However, we recognize that there is more that we can do outside of our operations. We continue to expand on our vision, going “beyond carbon neutral” to take a more holistic approach, both globally and locally. As we expand our program, we base our work on four sequential desired outcomes: (1) internalize the external cost of our emissions, (2) transform the culture of our company, (3) catalyze and accelerate climate-neutral innovation, and (4) support the transition to a low-carbon economy.

[how Microsoft is striving to become leaner, greener, and more accountable](#)” to learn more about our carbon neutral commitment.

3. According to [CDP](#), the use of internal carbon pricing is on the rise and gaining visibility, as evidenced through recent articles by [Triple Pundit](#) and [Environmental Leader](#).

4. Download our white paper [“The Microsoft carbon fee: the what, why, and how of Microsoft's efforts to drive culture change”](#) to learn more about the carbon fee model.

Microsoft was an early mover and innovator in using carbon pricing. What was your motivation and how has it changed how you do business?

At Microsoft, we understand that climate change is a serious challenge requiring a comprehensive and global response from all sectors of society. Our carbon program has helped us to increase awareness and education while raising funds to ignite environmental initiatives across the company. In the long term, it is also helping us to grow strategically as a sustainable business.

We built our carbon fee model to be as simple and replicable as possible, in the hopes that others would adopt and adapt it to fit their own organizational requirements. Over the last few years we have published [several white papers](#) and participated in a number of advisory councils to help our customers overcome potential hurdles as they work to implement their own ambitious carbon targets and internal carbon fees.

Why did you decide to begin investing in climate protection projects? Are you interested primarily in ‘climate neutral’ claims?

Climate protection projects are critical to our carbon program and, by extension, our operations. We invest in climate protection projects such as preparedness planning to ensure that we operate resiliently in the face of potential impacts from climate change. We also invest in carbon offset community projects around the world to compensate for the emissions associated with our business air travel and any energy consumption in regions where we cannot procure renewable energy. These carbon offset investments are important to our operational strategy, but they also positively affect communities around the world. To date, the carbon offset community projects that we have invested in have had an impact on more than 7 million people. These projects are directly contributing to the development of a low-carbon economy while helping increase energy access, improve education and healthcare, and empower women. We also align these investments with the United Nations (UN) Sustainable Development Goals (SDGs).

Our commitment to carbon, or climate, neutrality provides a clear corporate-wide direction for our own operations, but it also creates a significant opportunity to contribute more broadly. We started with the carbon fee, which internalizes the external cost of our emissions, helping us to drive awareness and education. This has helped to transform the culture of our company, embedding sustainability into the core and making it business as usual. We now have the foundation to catalyze and accelerate climate-neutral innovation, with the carbon fund providing the financial means to support and drive innovative climate-neutral projects that will lead to long-term global and local impact. As we continue to evolve our carbon program, we are beginning to measure its impact not just in terms of organizational value but also in terms of social contribution—using the financial resources and technological innovations made possible by the program to help with the long-term shift to a low-carbon economy.

How do you choose what projects to support with the funds generated by your internal carbon fee? How do Gold Standard projects figure into your portfolio?

Over the last four years, we've supported more than 45 projects in 26 countries. After an initial focus on investing in the areas of our operations, we evolved our program to also invest in projects that support youth and education. We have intentionally kept a broad portfolio including forestry, solar, wind, biomass, methane capture, cookstoves, and water filtration, all of which are essential to low-carbon sustainable development. In addition, energy access, opportunities for technology to enhance project impacts, and proximity to our datacenter locations are all key criteria that our offset partner, Natural Capital Partners, considers when reviewing possible opportunities.

All the projects that we support are verified and validated to a third-party standard, with approximately one-third from the Gold Standard (mainly the cookstove and water filtration projects).



BEYOND CARBON NEUTRAL

Q&A: How Microsoft is driving impacts on the ground

How important are the beyond-carbon sustainable development benefits? Do you consider outcomes from these climate protection projects as delivering against your other CSR or sustainability priorities?

We are expanding our carbon program to address the broader carbon impact of our business on the planet while actively contributing to the low-carbon transition through responsible and inclusive technology, research, and innovation. The beyond-carbon benefits delivered by the projects are an important part of this commitment by ensuring that our funds are contributing to sustainable development. I recently visited two of the projects that we support in Africa—in Malawi and Madagascar. It was inspiring to see first hand the impact of our investments on the communities in addition to the greenhouse gas (GHG) benefit of conserving forests. For example, in Malawi, farmers are starting beekeeping as a new source of income. In Madagascar, organizers are helping the communities to raise goats and chickens as an alternative source of meat to eliminate the need to hunt lemurs in the forests, training local people as guides and cooks to support eco-tourism, providing instruction on new rice-growing techniques to improve productivity, and developing a “pay it forward” club to enable all members of the community to raise goats (see <http://blogs.microsoft.com/green/2016/10/10/on-location-how-microsofts-carbon-fee-is-empowering-communities-in-africa> to learn more).

Is Microsoft aligning its work or CSR priorities to the Sustainable Development Goals? If yes, where are you in your journey? Have you taken steps to assess your impact on natural and social capital?

We increasingly prioritize alignment with the UN SDGs for our carbon offset community project

investments, helping ensure that our investments support a unified approach to climate action and broader community action. We hope to work in closer partnership with the UN to explore opportunities to further align our carbon offset community investments with the SDG goals and targets.

How does Microsoft communicate about your offsetting program? What do you think are key success factors in getting positive feedback?

We continue to participate in advisory councils and working groups to share best practices and lessons learned.

We use our blogs to talk about the projects, particularly focusing on non-carbon benefits such as biodiversity conservation, education, and health benefits. The 2015 UN Momentum for Change Lighthouse Activity Award also provided a platform to share our journey. We’ve also published [a series of white papers](#) that describe our efforts, including a playbook for setting up a carbon fee program; we published our fifth white paper, available at <http://aka.ms/beyond>, in November 2016.

Continuous communication is essential to getting positive feedback in a large organisation like Microsoft.

What recommendations do you have for companies considering climate strategies, including carbon offsets?

Ensure that you align with your organization’s values, mission, and strategies.

Surround yourself with experts—use the knowledge and experience of your partners to keep your program current and credible.

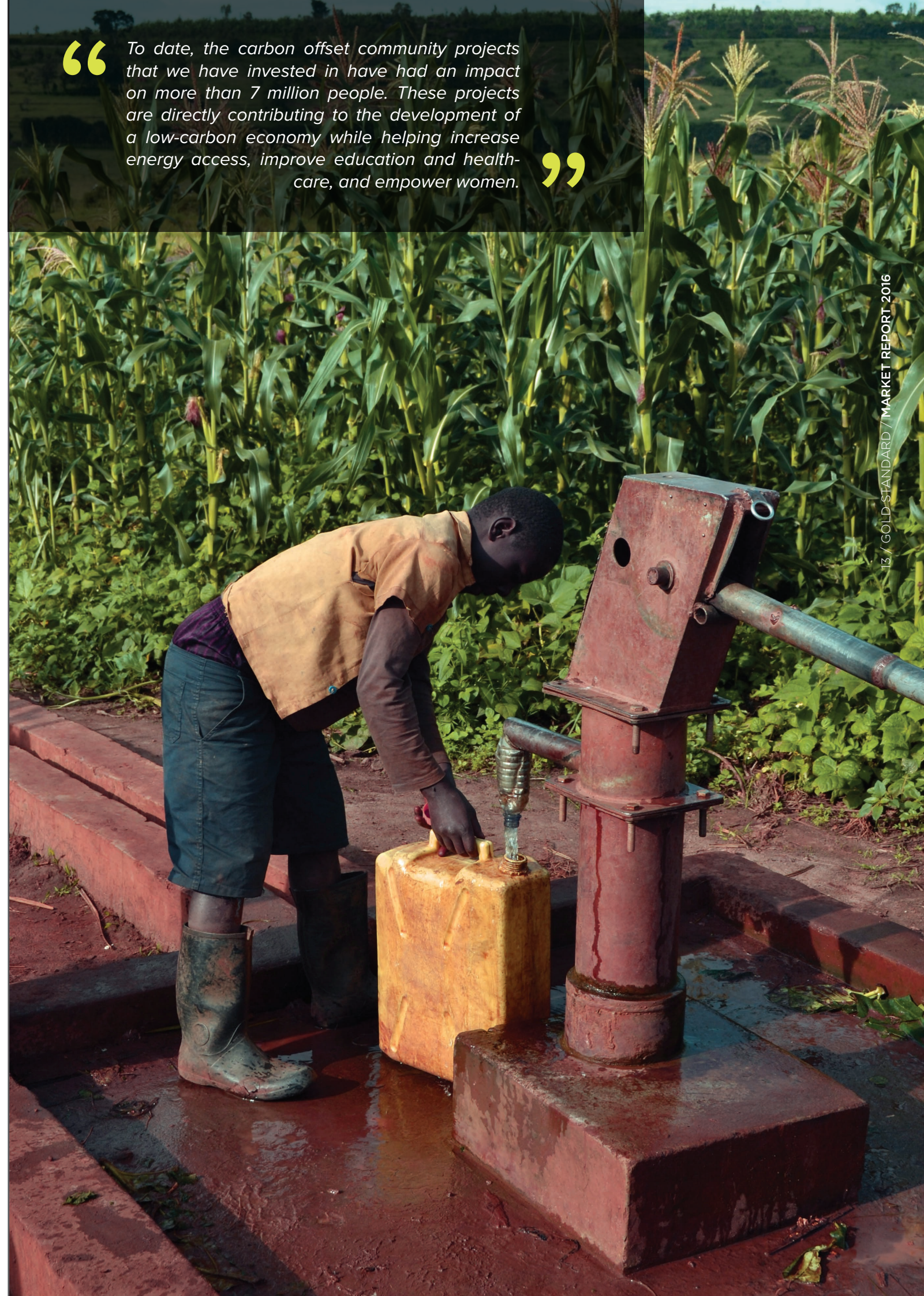
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To date, the carbon offset community projects that we have invested in have had an impact on more than 7 million people. These projects are directly contributing to the development of a low-carbon economy while helping increase energy access, improve education and health-care, and empower women.

”



TJ Dicaprio manages the implementation of the portfolio of investments to drive accountability and fund sustainability initiatives that accelerate low-carbon economic development. She is the Chief Architect of Microsoft’s carbon neutral fee, which was awarded the UN Momentum for Change Finance award in 2015. TJ has been awarded an Aspen Institute First Movers Fellowship and the C.K. Prahalad award for Business Sustainability Leadership and was recognized by Congress in 2013 for receiving the U.S. EPA Individual Leadership award.





MAKE AN IMPACT

With our Gold Standard projects

Gold Standard projects deliver sustainable development impacts alongside climate mitigation. Now with an ambitious 2030 Agenda, we are engineering our new standard, Gold Standard for the Global Goals, to ensure that climate action also contributes to the UN Sustainable Development Goals in a meaningful and measurable way. These projects are just a couple of examples of how Gold Standard certification catalyses more ambitious climate action to achieve the Global Goals through robust standards and verified impacts.

All Gold Standard projects will be eligible to transition to Gold Standard for the Global Goals when it is launched in mid 2017.

Learn more about [Gold Standard for the Global Goals>>](#)

“

In response to the Paris Agreement, and the gathering evidence of the need to take fast and large-scale action on climate change, we have been encouraged to see more corporates in 2016 taking responsibility for their climate impacts, and embracing carbon offsetting as an immediate, cost-effective and critical component of their carbon reduction strategies.

This momentum needs to increase and we believe it will in 2017. Only 14% of CDP respondents in 2014 offset their emissions, so there is enormous potential for the private sector to step up and take large-scale climate action through a simple commitment to offset their unavoidable emissions.

Increasingly, corporate clients are looking for more multifaceted and highly communicable projects to support. Alongside dealing with their climate change impacts, over the past 12 months we have helped many of our corporate partners to support the UN Global Goals for Sustainable Development whilst delivering increased value to their businesses. Offsetting through projects that deliver measurable social impacts alongside robust emission reductions provides a great opportunity to deliver these multiple corporate objectives cost-effectively.

”

Sophie Brooks, Director of Client Services, ClimateCare



CLEAN COOKING FOR INDONESIA

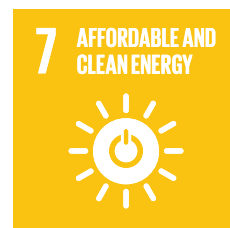
The Indonesia Domestic Biogas Programme (IDBP) is implemented by Hivos. It distributes domestic biogas digesters as a local sustainable energy source, replacing polluting firewood and expensive fossil fuels. A biogas digester converts dung into biogas which is used for cooking and lighting. The digested manure is a supreme fertiliser, used by local farmers to help increase food and agriculture production. Slowing deforestation has wide environmental benefits, including climate change mitigation, biodiversity protection and reduced soil erosion.

Project Impacts

- » 16,500 constructed biogas digesters in 9 provinces across Indonesia
- » 132,700 tonnes of CO2 emissions avoided
- » 42,600 tonnes of firewood saved and 3,500 tonnes of LPG replaced
- » 110 constructors employed by the programme
- » 1,400 direct jobs as supervisors, masons and promoters
- » 1,000 households sell bioslurry on the market
- » 60 minutes of daily time savings for women

What's the project worth?

- » Based on cost and according to Fairtrade, the MINIMUM price should be 8.10€
- » Based on value delivered, a credit from a Gold Standard biogas project provides \$41 in additional benefits beyond carbon



When you invest in this Indonesian project, you are:

- » Supporting a 100% clean cooking solution
- » Developing commercial, market-oriented renewable energy sector
- » Promoting farming of organic vegetables & fruits
- » Improving the health of especially women and children
- » Empowering women through income generation



SUSTAINABLE TIMBER IN PANAMA

CO₂OL Tropical Mix is reforesting degraded pastureland with a mix of native tree species plus teak. Historically, the source for tropical timber has either been primary rainforest or large-scale monoculture plantations. The project, initially developed by ForestFinance and recently extended by the partner Sustainable Timber and Isla Cebaco, is based on a model that combines sustainable and high quality timber production with biodiversity protection and ecosystem restoration. These forests offer a natural habitat for native animals and plants, protect and enrich the soil, save and filter water and contribute to the mitigation of climate change.

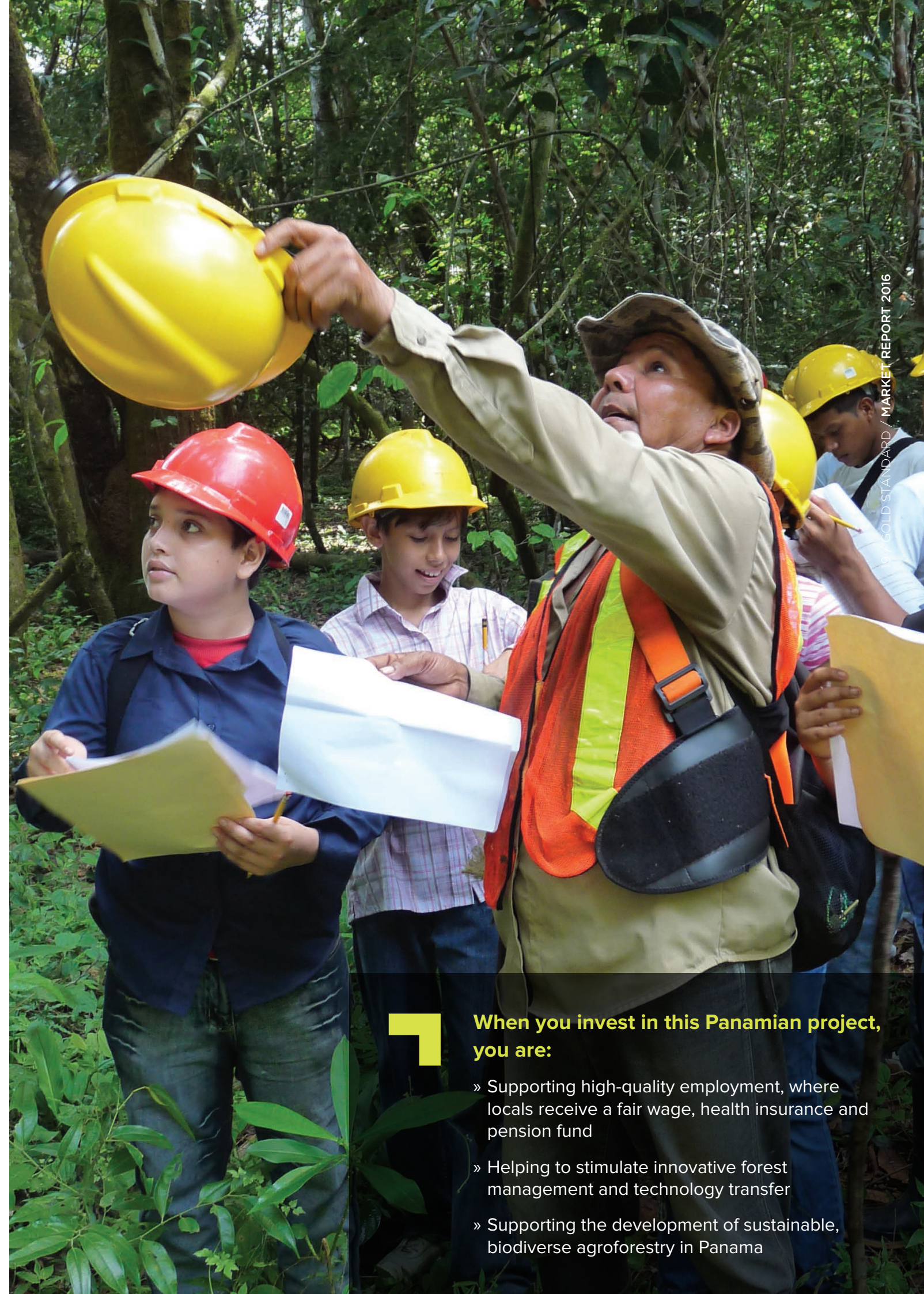
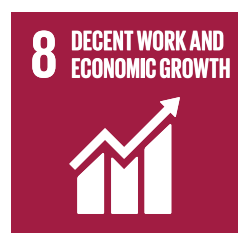
The project is also implementing a mix of cacao and native tree species in some areas, creating an agroforestry element to this project. By investing in these systems, you are helping to generate a high value wood and cacao yield that is ecologically and socially sustainable.

Project Impacts

- » >3.5 m trees have been planted
- » 15% of the total expanse is a declared nature reserve, which further increases biodiversity, ecological benefits, as well as the stability of the forests.
- » Through their distribution, the reforestation areas serve as bridges for wandering animals seeking new habitats.
- » 15 threatened animal species from the Red List found a habitat in the project.
- » 150 long-term jobs created for locals.

What's the project worth?

- » Based on cost and according to Fairtrade, the MINIMUM price should be 13.00€
- » Based on value delivered, a credit from a Gold Standard forestry project provides \$177 in additional benefits beyond carbon



When you invest in this Panamanian project, you are:

- » Supporting high-quality employment, where locals receive a fair wage, health insurance and pension fund
- » Helping to stimulate innovative forest management and technology transfer
- » Supporting the development of sustainable, biodiverse agroforestry in Panama



GOLD STANDARD

Market Report

This section of the report provides our up-to-date supply and demand data for 2016. For historical data, please refer to previous editions of this [report>>](#). The report also provides our project issuance projections for Q1 2017.

“

We expect the voluntary market to increase and we have already seen significant demand from new entrants. There is a growing focus on projects based on the level of contribution to the Global Goals. While there remains significant oversupply of credits globally, there are insufficient volumes of credits originating from community based projects (cookstoves, household biogas, and sustainable agriculture) in certain geographies such as southeast Asia or East/West Africa that are in high demand. As the market evolves, we also see actors taking a step back from focusing on the actual carbon credit and rather looking more on how to apply a certification approach to ensure funders the maximum benefits or ROI are realized.

”

William Theisen, Director of Business Development, EcoAct

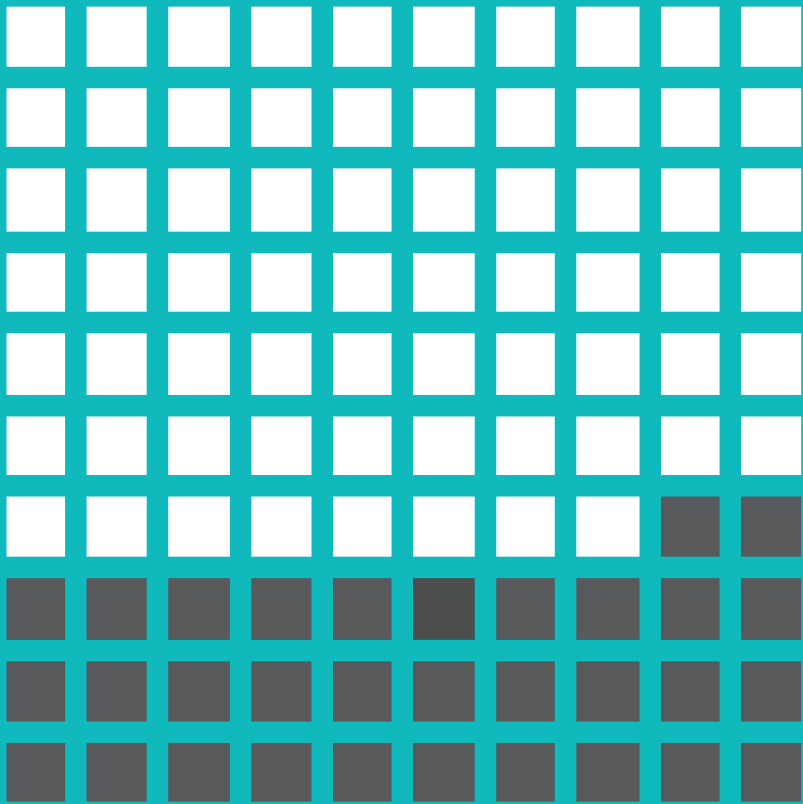
GOLD STANDARD 2016

2016 issuances + retirements

We have 1400+ projects in our pipeline with a potential to save nearly 100 million tonnes of CO₂ per year* from entering our atmosphere – which is roughly equivalent to mitigating one in every eight air travel flights that occurred in 2015. Figure 1 indicates the supply and demand for Gold Standard VERs throughout 2016. Although there is no direct correlation between issuances and retirements from the same year – i.e. retirements could have come from projects issued in previous years – this graph provides an indication of the market for Gold Standard projects.

Figure 1

7.2 million GS VERs retired in 2016



10.5 million GS VERs issued in 2016

*Based on average annual expected emission reductions figures.

2016 issuance + retirement volumes by quarter

Table 1 shows how many emission reductions were issued 2016. In total, 290 projects issued 3.2 million carbon credits or validated A/R certificates in Q4 2016, amounting to a grand total of 10.5 million issued VERs. The vast majority of these issuances came from energy projects, representing 95% of total projects issued in 2016. The table also shows the VER retirements for the same period. Retirements ranged from organisations such as Credit Suisse, State Street, COOP, and events such as the [GLOBALG.A.P SUMMIT 2016](#)>>.

Table 1

	Q1 2016	Q2 2016	Q3 2016	Q4 2016
Issued CERs	609,042	707,364	855,966	420,090
Issued VERs	1,881,259	3,869,568	1,761,856	2,805,384
Validated A/R VERs	41,355	74,636	106,568	8,198
Total Issuances	2,531,656	4,651,568	2,724,390	3,233,672
Total VER Retirements	1,879,526	1,972,757	1,304,996	2,034,860

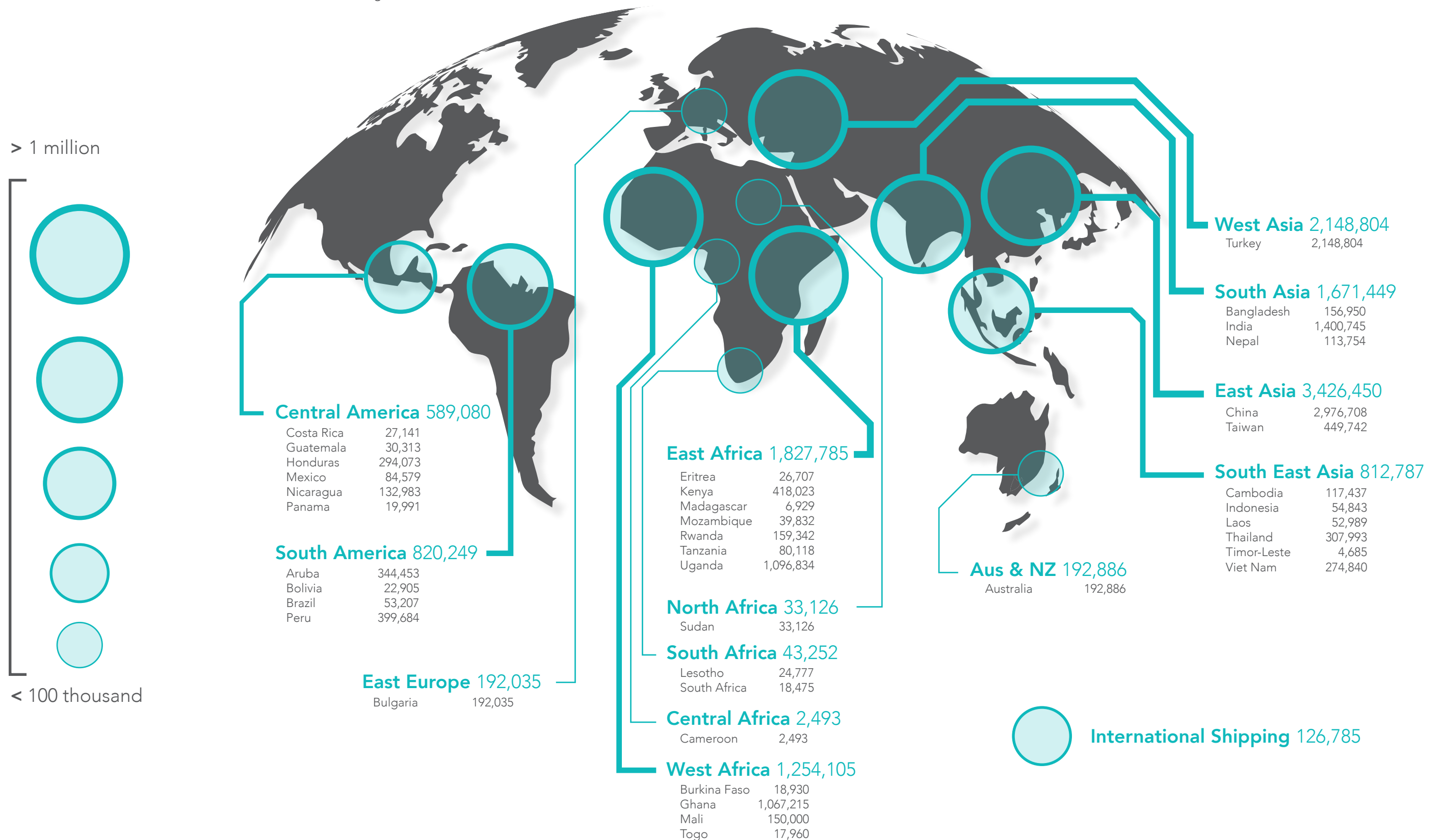


GOLD STANDARD 2016

2016 issuance volumes by location

In 2016 we issued carbon credits from projects based in 39 different countries around the world. Figure 2 below provides an overview of where these issuances took place.

Figure 2



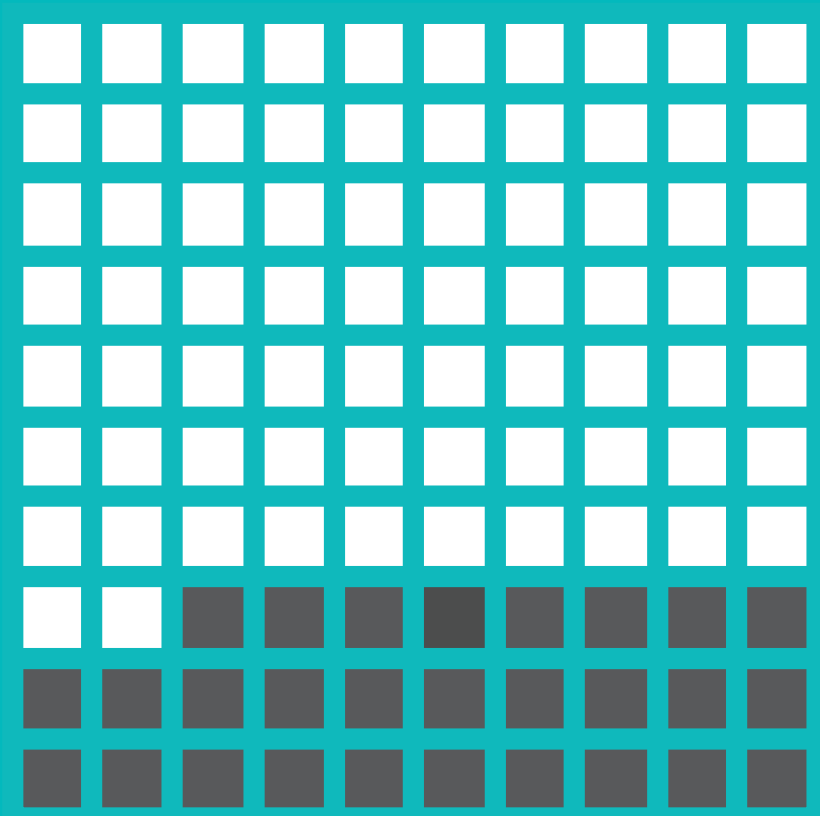
GOLD STANDARD Q4 2016

Q4 2016 issuances + retirements

Figure 3 indicates the supply and demand for Gold Standard VERs for Q4 2016. Retirements outpaced issuances by 30% this quarter. Compared to last quarter, the volume of issuances and retirements have increased by 59% and 56%, respectively.

Figure 3*

2 million GS VERs retired in Q4 2016



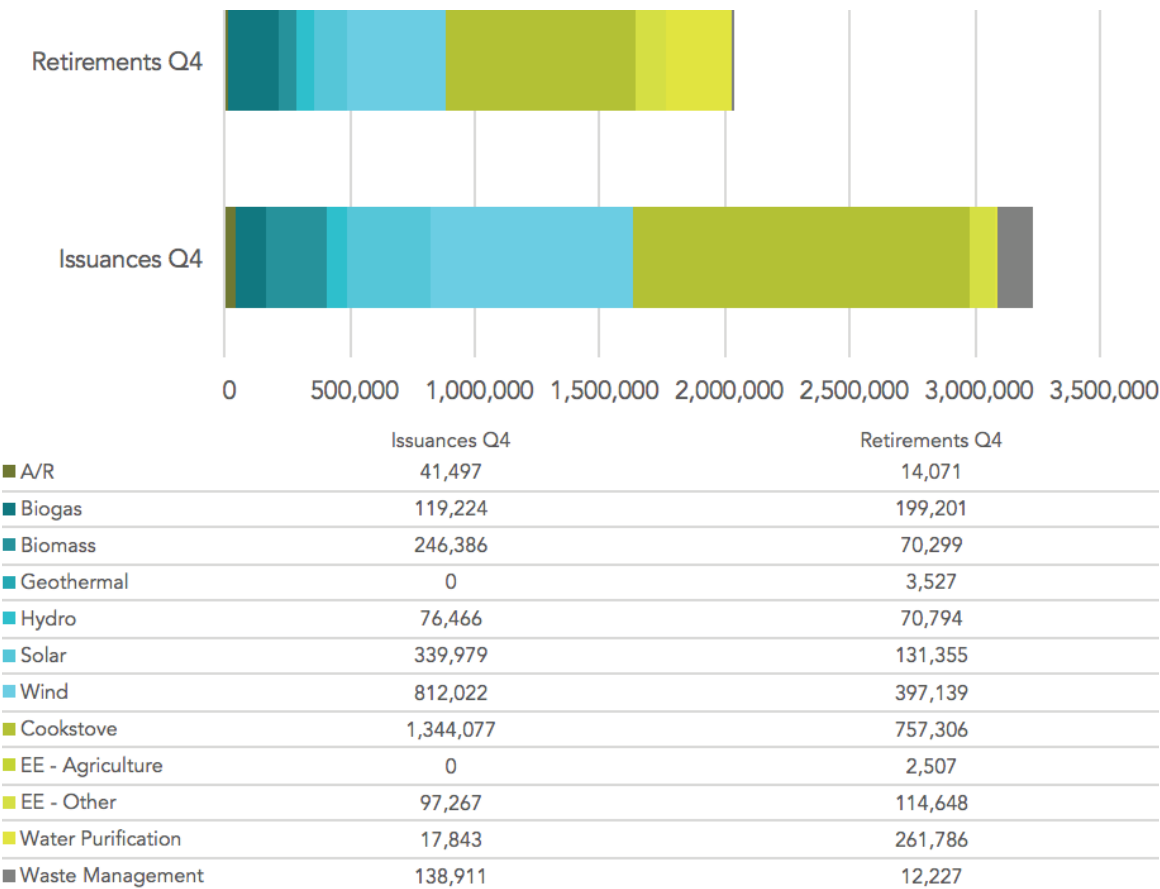
2.8 million GS VERs issued in Q4 2016

*This graphic is for guidance only to give an indication of the market for Gold Standard credits. There may not be a direct correlation between retirements and issuances - i.e. retirements could have been made against projects issued in previous quarters.

Q4 2016 issuance + retirement volumes by project type

Figure 4 tracks the issuance and retirement volumes by project type for Q4 2016. As in the previous quarter, Water Purification projects continue to show strong demand, with over 260,000 credits retired compared to 17,000 issuances. Retirements for Biogas and Energy Efficiency projects also outpaced issuances. Conversely, wind, solar and biomass projects retired less than they issued.

Figure 4



Q4 2016 retirement volumes by location

Table 2 provides some insight into which regions retired credits from which countries in Q4 2016. Projects based in Africa or Asia received the most retirements from organisations based in Europe.

Table 2

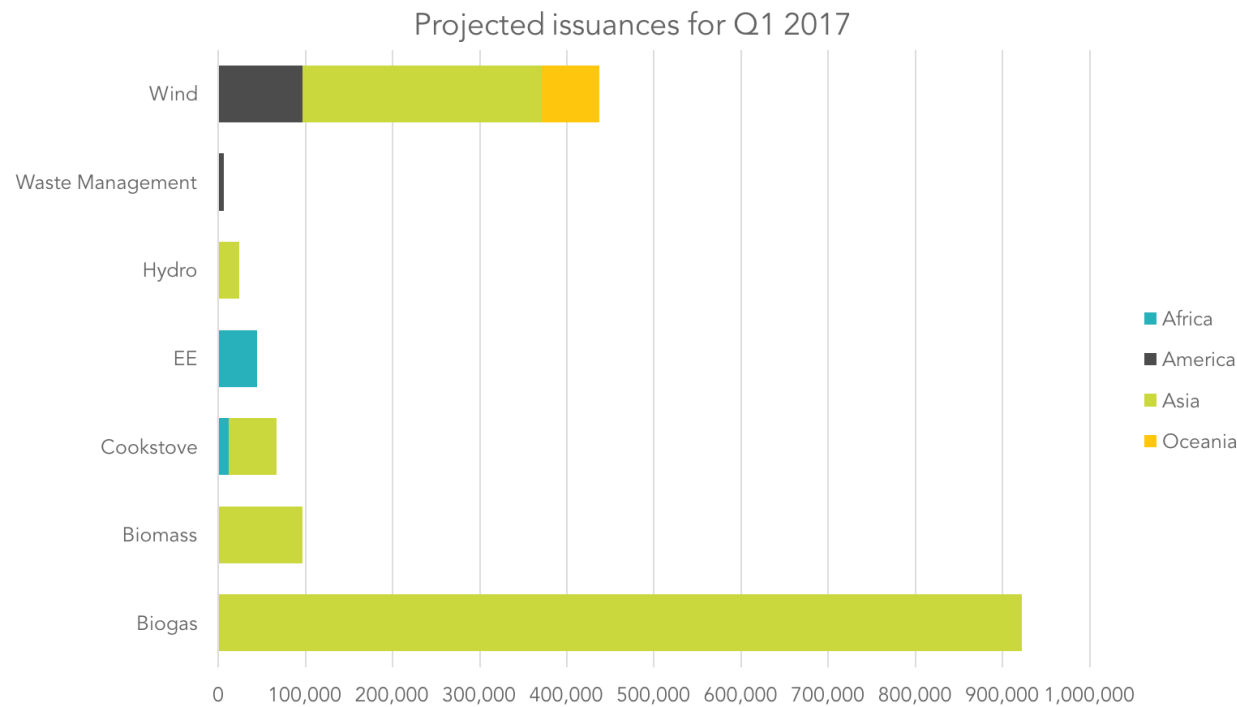
From ▼ To ►	America	Asia	Europe	Oceania	Grand Total
Africa	51,053		939,212	8,640	998,905
America	90		100,171	5,044	105,305
Asia	22,998	6,219	854,876	33,739	917,832
Europe			800		800
Oceania			8,992	3,026	12,018
Grand Total	74,141	6,219	1,904,051	50,449	2,034,860



Gold Standard projections for Q1 2017

We issued 60% more credits than expected in Q4 2016, with cookstove, biomass and wind projects issuing significantly more than projected. Water purification projects issued less than originally estimated. For the first quarter of 2017, a total of 67 projects are expected to issue over 1.5 million emissions reductions, with the bulk of these issuances being driven by household biogas and wind energy projects in Asia. Figure 5 below provides a visual breakdown of these projections by project type and location.

Figure 5



Projected project issuances for Q1 2017

Table 3

Project Type ▼ Region ►	Africa	America	Asia	Oceania	Grand Total
Biogas			921,978		921,978
Biomass			96,638		96,638
Cookstove	11,910		54,697		66,607
EE	44,862				44,862
Hydro			23,800		23,800
Waste Management		6,350			6,350
Wind		96,468	274,605	66,542	437,615
Grand Total	56,772	102,818	1,371,718	66,542	1,597,850

We hope you find this data of value, we would like to evolve and improve this report over time and welcome your comments or suggestions.

Please send any feedback to info@goldstandard.org

