

International Workshop on Carbon Markets in Emerging Economies

Voluntary Market experience

November 2010

Divaldo Rezende PhD

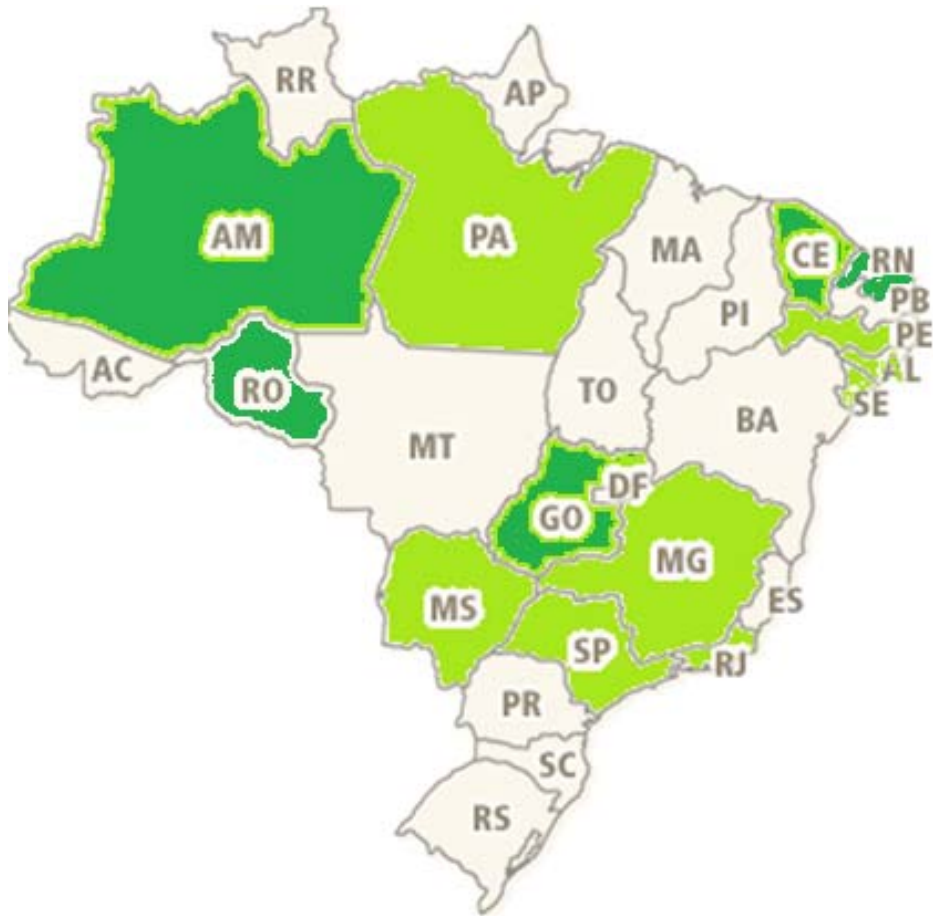
Who We Are

Sustainable Carbon is a co-developer of greenhouse gas emission (GHG) reductions projects for the carbon market. We manage a portfolio of over 17 million carbon credits, the majority of which are verified emission reductions (VERs) that bring substantial social, environmental and economic benefits to our stakeholders. We are:

- **Experts** in renewable energy, fuel-switching, co-generation, potent GHG destruction and biomass projects for both the voluntary and compliance markets
- **The leading project developer** in terms of the number of VCS and SOCIALCARBON®-validated projects on the [Markit® Environmental Registry](#)
- **Expanding** our geographic scope throughout South America, North America and Africa

Project Locations

Current Project Locations 



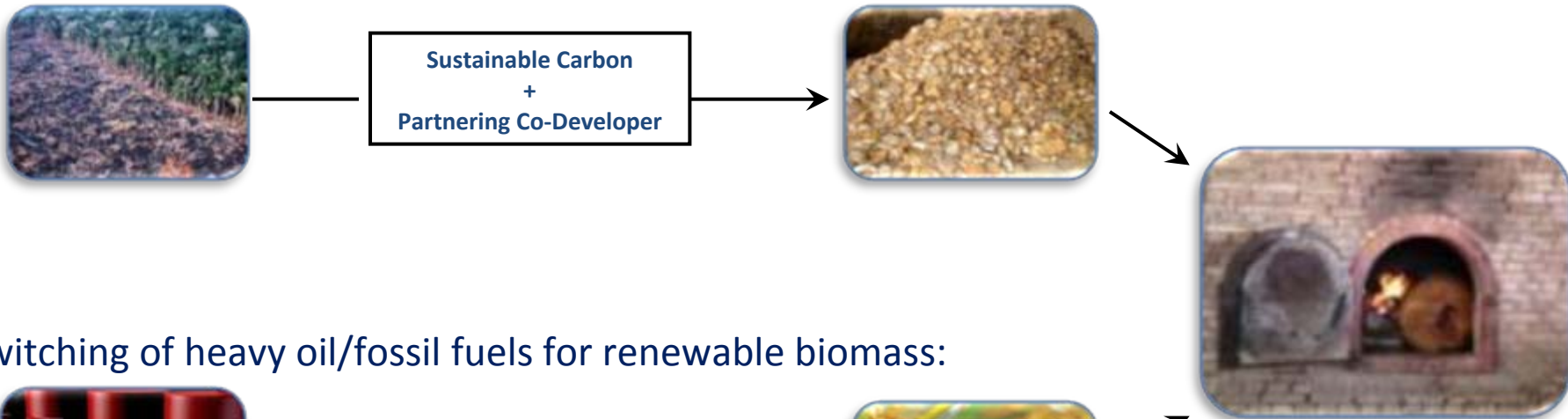
2010 Project Locations 



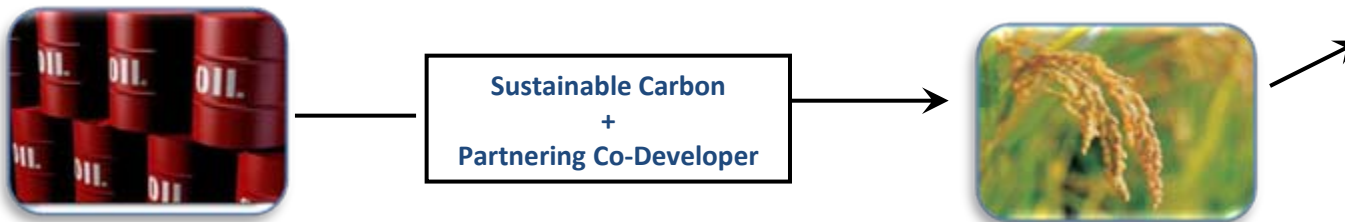
Our Projects

Working primarily with ceramic factories in rural Brazil, our *fuel-switching* projects promote the use of energy sources that are environmentally-responsible by changing the types of energy sources that fuel small and medium industrial production:

- Switching of native, old-growth forest timber for renewable biomass:

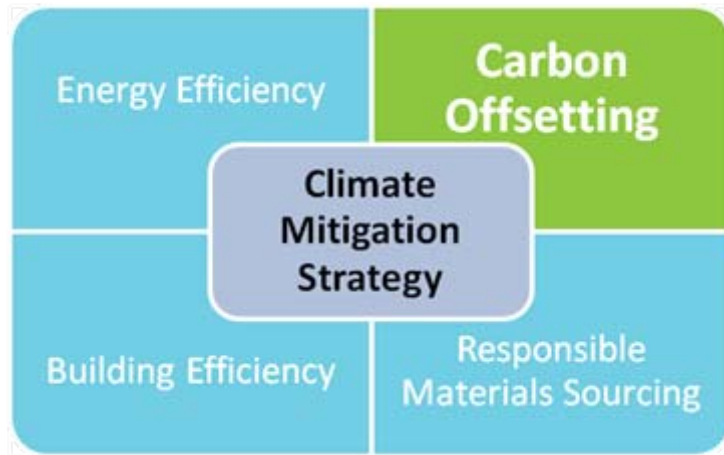


- Switching of heavy oil/fossil fuels for renewable biomass:



Our Projects

Business' Climate Mitigation Strategy



Sustainable Carbon Projects' Climate Strategy



Sustainable Carbon Projects' Climate Strategy

- Energy Efficiency:** Renewable biomass burns hotter and cleaner
- Responsible Materials Sourcing:** Renewable biomass is used instead of fossil fuels or old-growth timber
- Building Efficiency:** Kiln changes & new plant layouts improve safety & reduce emissions.
- Credit Revenue:** Part of the revenue generated from the commercialization of credits are reinvested to continually improve the project.

Comprehensive Benefits



PRODUCT/SERVICE DIFFERENTIATION

- Consumers the world over are increasingly aware of the impact their consumption of goods has on the environment.
- A low-carbon product or service **differentiates** you from your competitors



TOP-TALENT SATISFACTION

- Human capital is critical to business success.
- Strong and demonstrable commitment to sustainability helps **recruit and retain top talent** for your company.

Communication Case Study: Natura Cosmetics

Interactive site lets Natura communicate sustainability initiatives with customers:

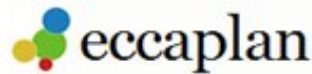
• <http://scf.natura.net/Conteudo/Default.aspx?MenuStructure=4&MenuItem=29>

The screenshot displays the 'Natura Carbon Neutral' website interface. At the top, there is a green header with the title 'Natura Carbon Neutral'. Below the header is a navigation menu with five tabs: 'Commitment', 'Inventory', 'Reduction', 'Offset', and 'Bidding'. To the right of the navigation menu, there are three icons representing different countries (Brazil, Spain, and the USA) and a list of links: 'CASE DOWNLOAD', 'PRINT VERSION | VIEWING', and 'GLOSSARY'. Below the navigation menu is a large yellow area containing a map of South America. The map is titled 'GEOGRAPHICAL DISTRIBUTION OF PROJECTS' and shows various project locations marked with icons. A legend on the left side of the map identifies the icons: a tree for 'Avoided deforestation', a sun for 'Energy projects', and a globe for 'Forestry projects'. Text on the map states: 'Use of Renewable Biomass in Ceramic Industries 60 thousand tons of CO₂e (offset of 2008*)'. A note at the bottom of the map reads: '*The Projects for the GHG offset for 2008 are in the final phase of being contracted.' A 'Back' button is located in the top left corner of the yellow area.

Buyers of Sustainable Carbon's Credits:



INTER-AMERICAN DEVELOPMENT BANK
BANCO INTERAMERICANO DE DESARROLLO



State of the Voluntary Carbon Market 2010

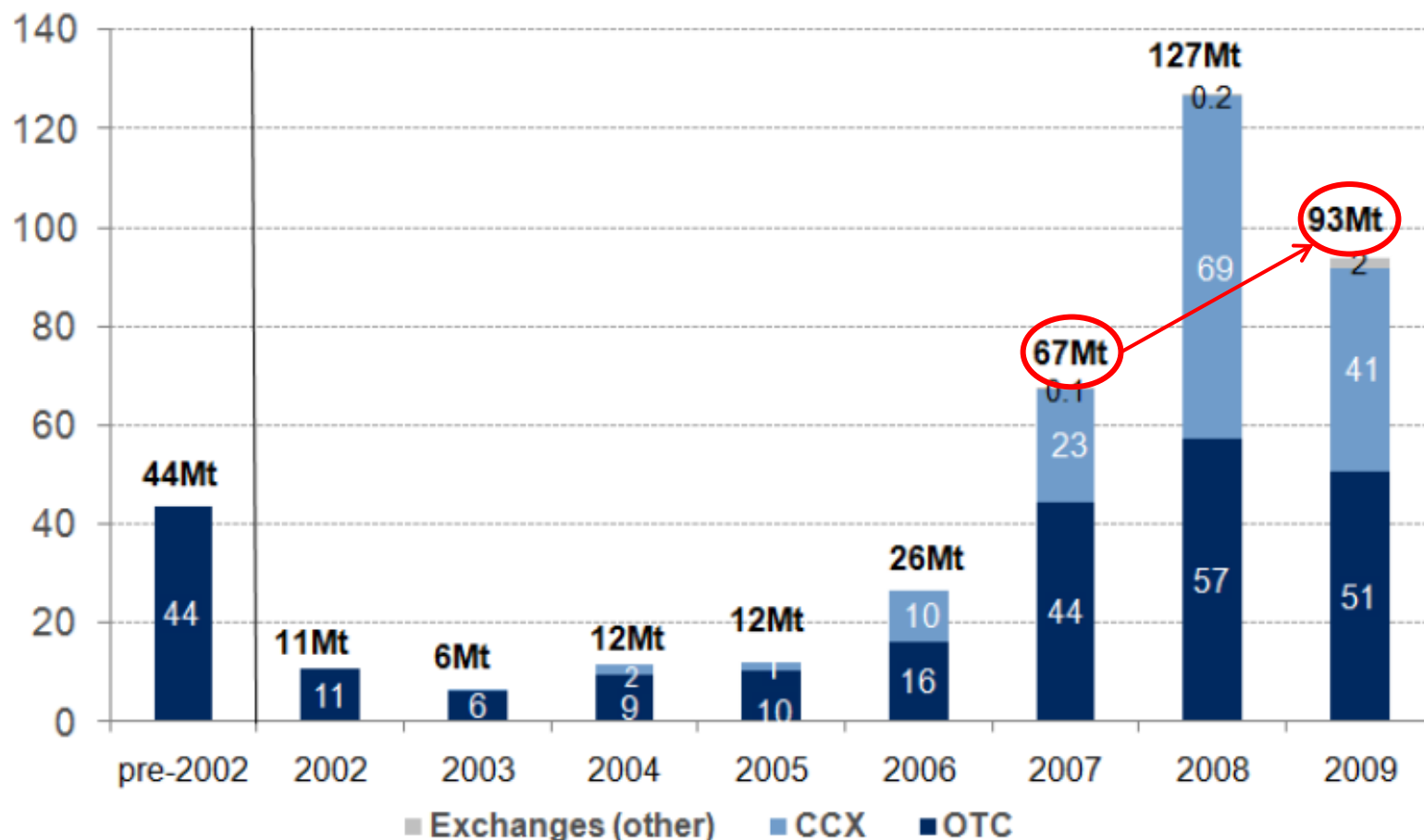
Ecosystem Marketplace & Bloomberg NEF Report Summary

Ecosystem Marketplace

Bloomberg
NEW ENERGY FINANCE

Global Carbon Market 2009

Figure 1: Transaction Volume Growth for the Voluntary Carbon Markets



Source: Ecosystem Marketplace, Bloomberg New Energy Finance.

Despite the decline in the transaction volume, **the volume in 2009 was still 39% above 2007 levels**, giving the market optimism for growth

Global Carbon Market 2009

Table 1: Transaction Volumes and Values, Global Carbon Market, 2008 and 2009

Markets	Volume (MtCO ₂ e)		Value (US\$ million)	
	2008	2009	2008	2009
Voluntary OTC	57	51	420	326
CCX	69	41	307	50
Other exchanges	0.2	2	2	12
Total Voluntary Markets	127	94	728	387
EU ETS	3,093	6,326	100,526	118,474
Primary CDM	404	211	6,511	2,678
Secondary CDM	1,072	1,055	26,277	17,543
Joint Implementation	25	26	367	354
Kyoto [AAU]	23	155	276	2,003
New South Wales	31	34	183	117
RGGI	62	813	241	2,667
Alberta's SGER	3	5	34	61
Total Regulated Markets	4,713	8,625	134,415	143,897
Total Global Markets	4,840	8,719	135,143	144,284

Source: Ecosystem Marketplace, Bloomberg New Energy Finance, World Bank.

Though the overall voluntary market declined by nearly half, the OTC market where Social Carbon + VCS credits trade **declined significantly less** than in the CCX market.

Building Bridges: An Overview of the Report

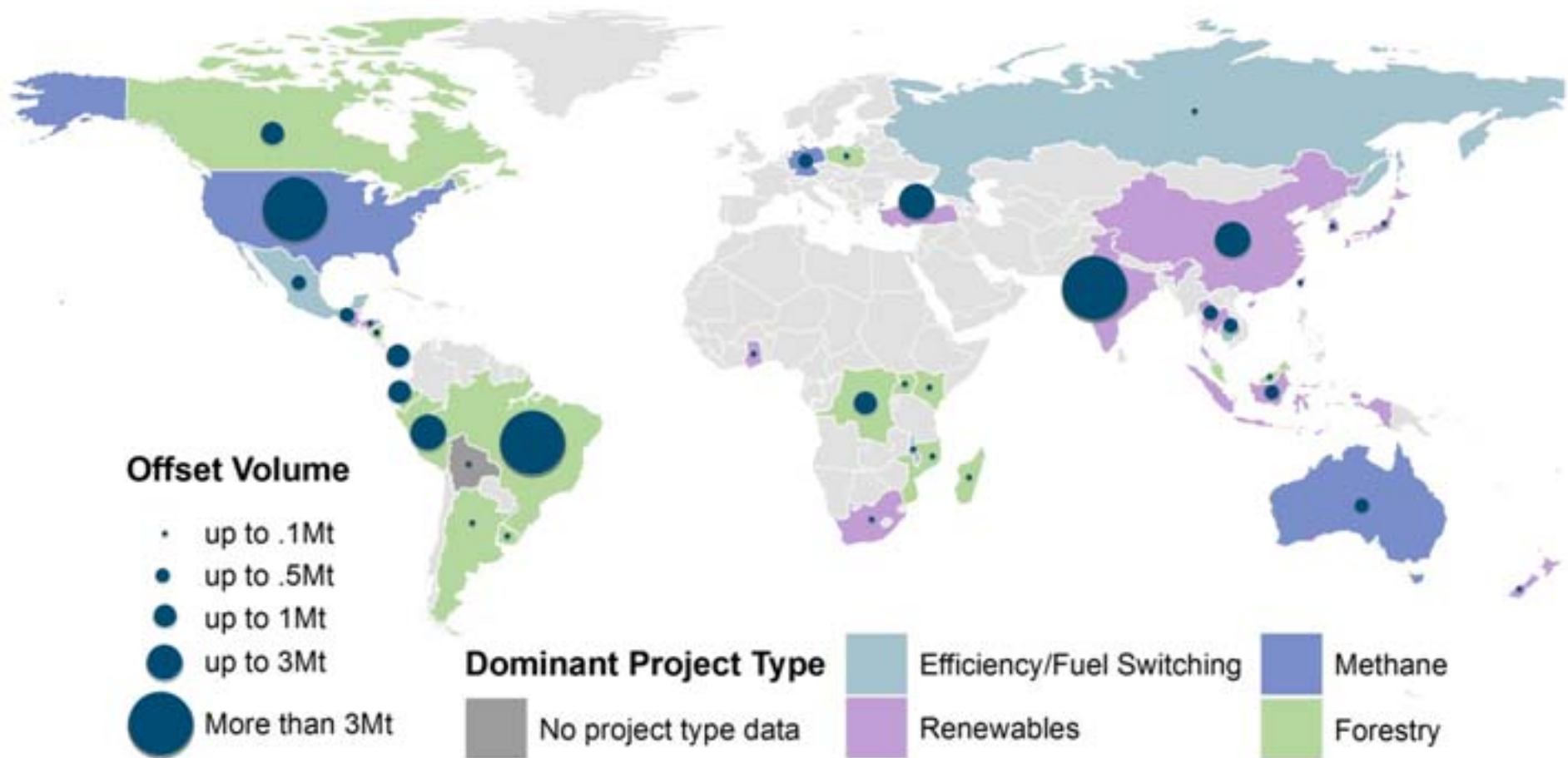
In 2009, the Voluntary Carbon Market experienced its most difficult year to date:

- The Great Financial Crisis (GFC) slashed corporate budgets for offsetting
- National debt imbalances, the GFC and “climate gate” conspired to kill would-be regulatory regimes in the United States, Australia and New Zeland (among others), depressing sales
- Result: The total value of the “pure” voluntary market dropped by nearly 50% over the previous year

However, market players are bullish about a **strong rebound** in 2010:

- The pre-compliance segment of the voluntary markets, primarily in the US, demonstrated significant growth during 2009.
- Despite the GFC, SOCIALCARBON® credits saw an average **increase** of US\$.20 per credit to US\$7.6
- Eleven project developers plan to use the SOCIALCARBON® Standard in their projects this year, speaking to the robustness of the standard.

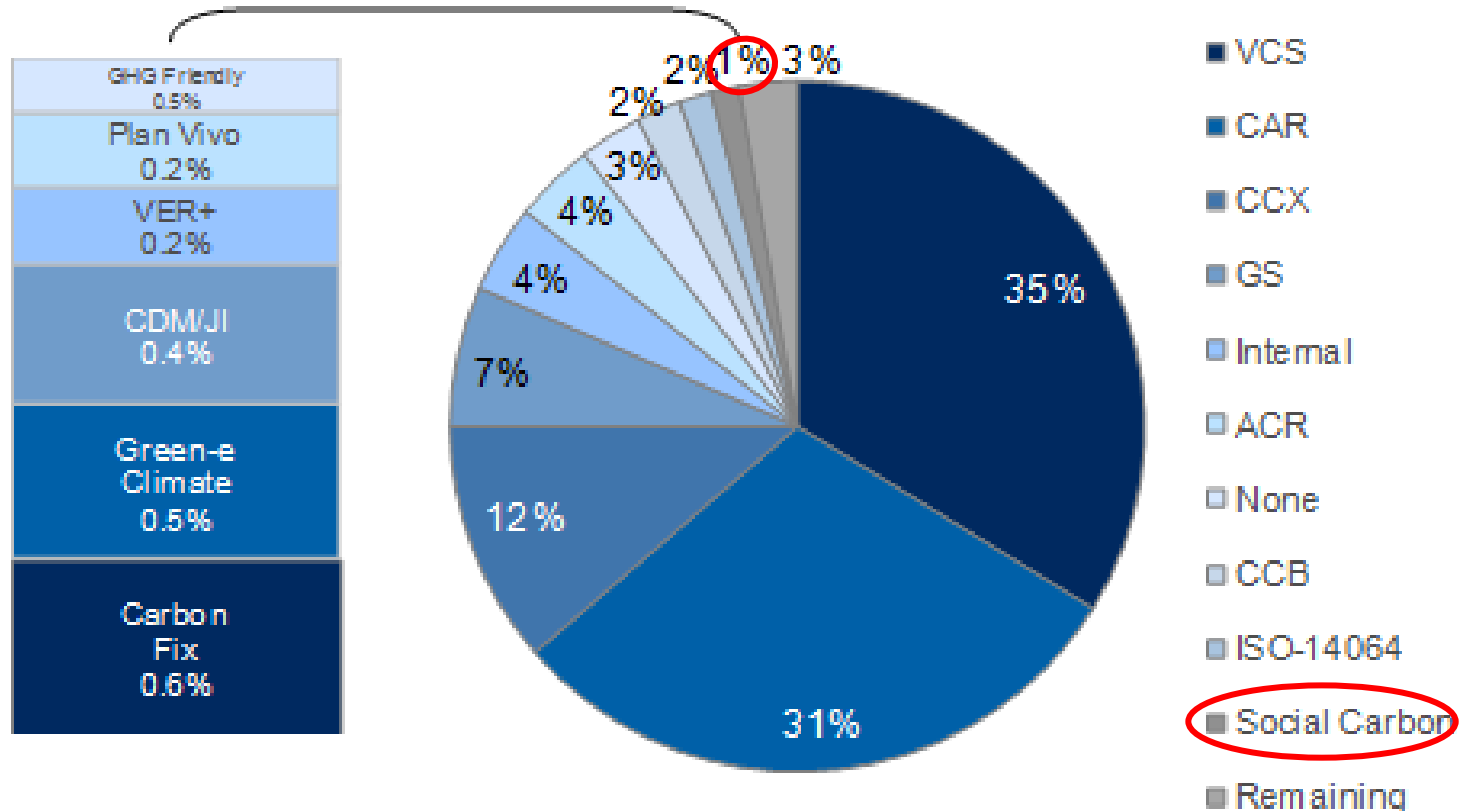
Transaction Volume and Project Type Location



• In 2009, Latin America experienced growth, particularly in the forest carbon markets. Two countries, Brazil and Peru, supplied the bulk of the credits totaling 12% of the total OTC market volume

VCS & SOCIALCARBON Standard Market Share

Figure 6: Third-Party Standard Utilization, OTC 2009



Source: Ecosystem Marketplace, Bloomberg New Energy Finance

Social Carbon managed a slight increase in its market share (from 1% to 1.3%) and all Social Carbon credits transacted were stacked with VCS verification, the most trusted and widely-used standard in the voluntary market as it is the only voluntary carbon standard specifically designed to exacting ISO principles.

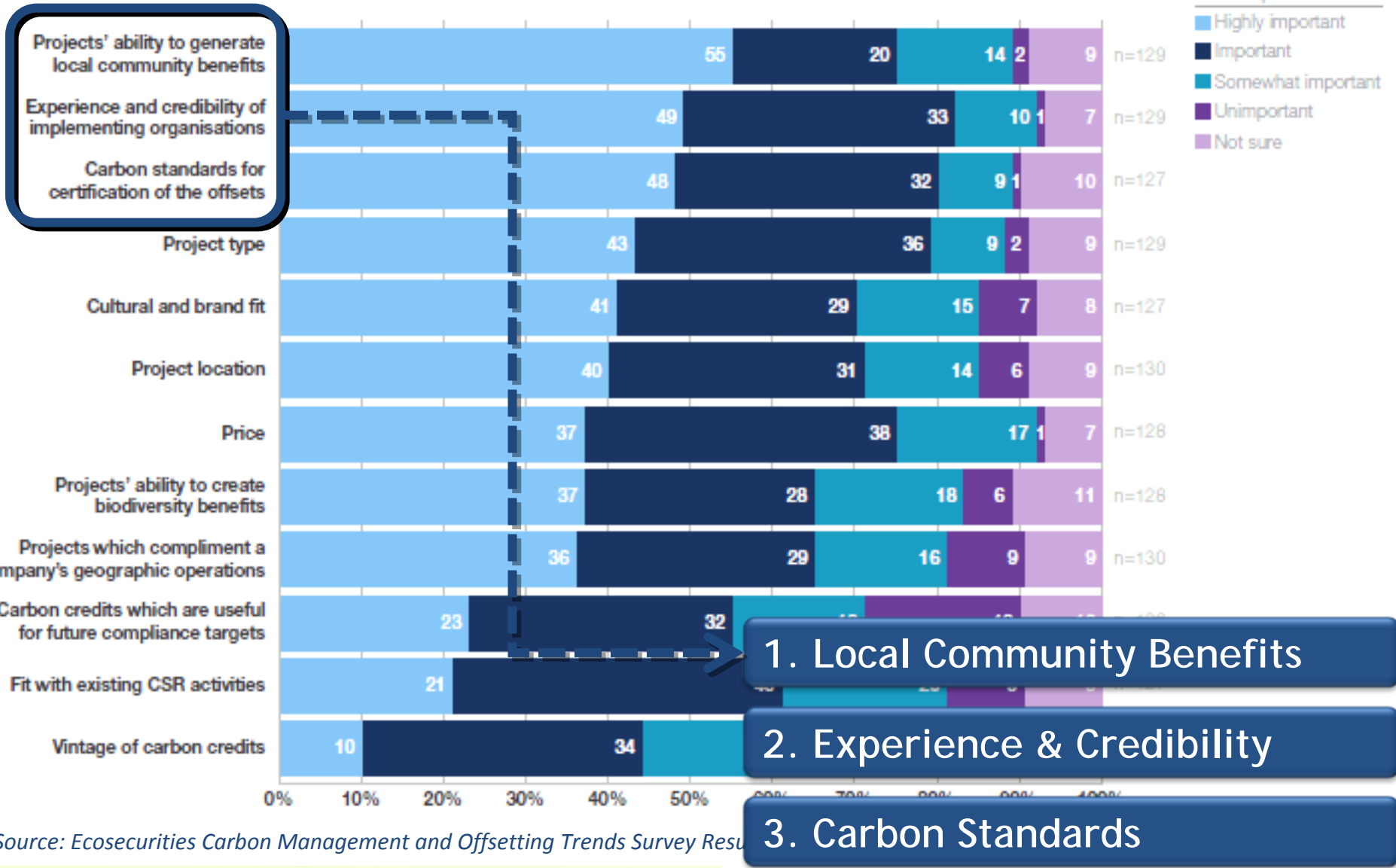
Social Carbon managed a slight increase in its market share (from 1% to 1.3%), and all Social Carbon credits transacted were stacked with VCS verification. Greenhouse Friendly, CDM/JI and VER+ all saw continued declines in transaction volumes as combined, they captured less than 1% of the market.



What Buyers Want...

What are the most important factors your company considers when purchasing carbon credits?

Key
 n = sample size
 Highly important
 Important
 Somewhat important
 Unimportant
 Not sure



1. Local Community Benefits

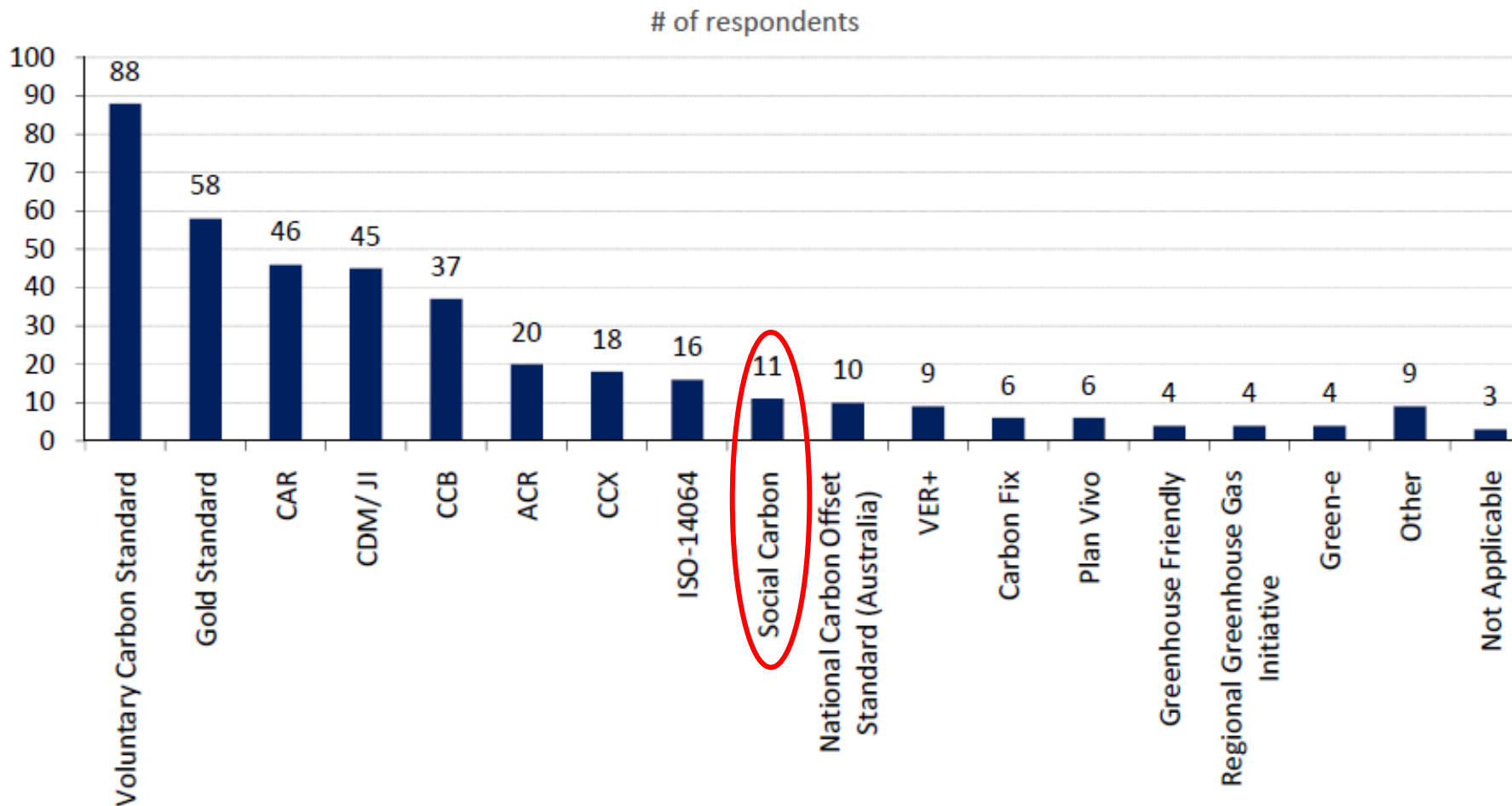
2. Experience & Credibility

3. Carbon Standards

Source: Ecoscurities Carbon Management and Offsetting Trends Survey Results

Popularity of Co-Benefit Standards

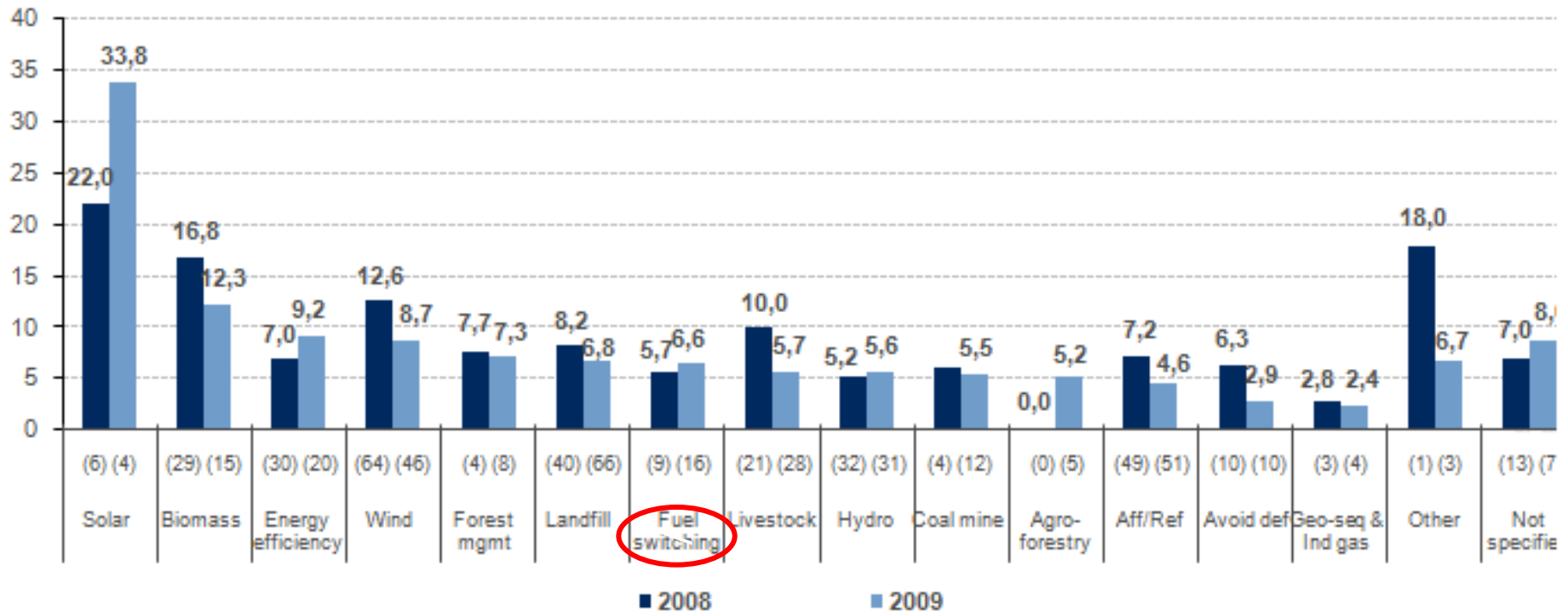
Figure 51: Standards Suppliers Intend to Use in 2010



Source: Ecosystem Marketplace, Bloomberg New Energy Finance.
 Based on 129 survey respondents

Price of Project Type

Figure 23: Average Credit Price by Project Type, OTC 2008 vs. 2009
 US\$/tCO₂e



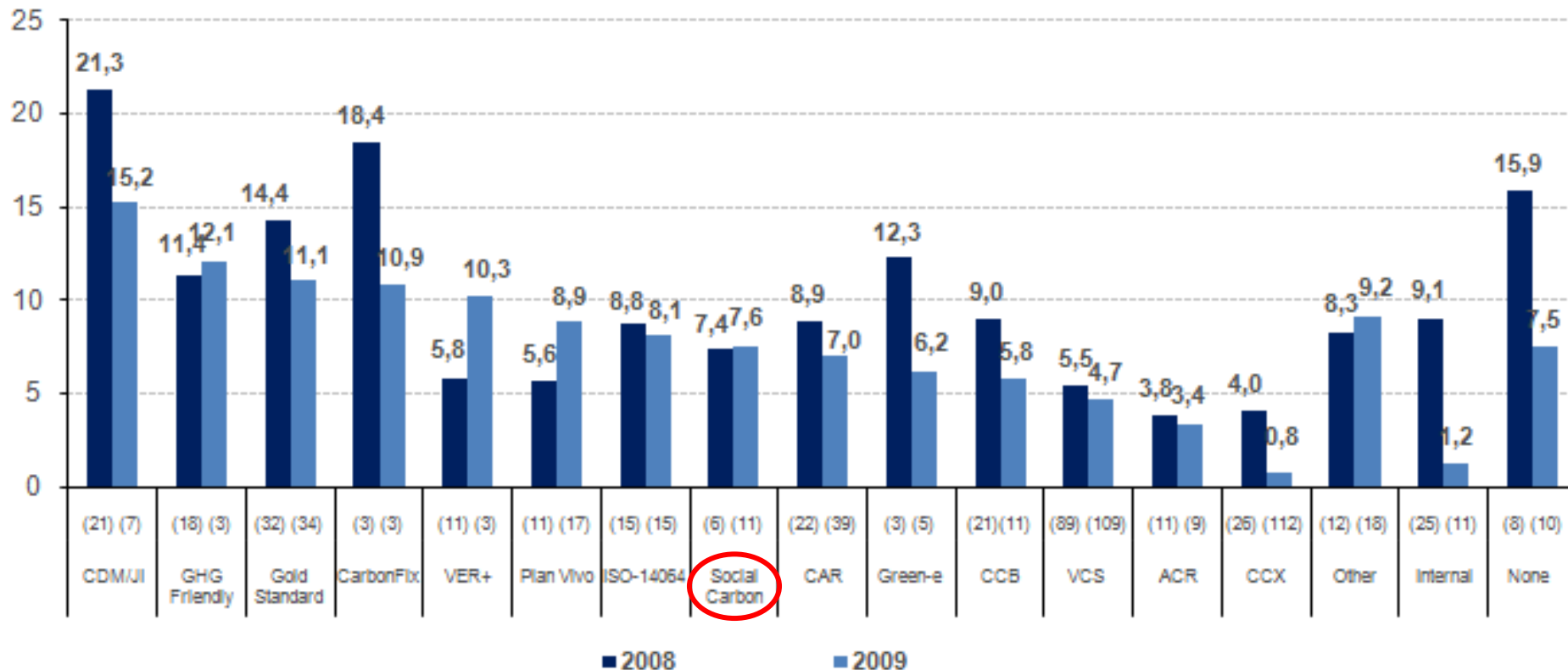
Source: Ecosystem Marketplace, Bloomberg New Energy Finance. Note: 2009 figures based on 326 observations, 2008 figures based on 330. Observations

There was an **increase in the price for fuel switching projects**, from \$5.7/tCO₂e to the relatively **high price of \$6.6/tCO₂e**, due primarily to the fact that the majority of these projects are validated by and generate Social Carbon plus VCS credits.

VCS & SOCIALCARBON Standard Price

Figure 34: Average Price by Standard, OTC 2008 vs. 2009

US\$/tCO₂e



Source: Ecosystem Marketplace, Bloomberg New Energy Finance. Note: Based on 418 observations.

Prices for VCS-stacked Social Carbon credits increased slightly, up 3% from 2008 to an average \$7.6/tCO₂e in 2009

Co-Benefit Standards and the International Carbon Market:

- Four widely-recognized co-benefit standards:

- SOCIALCARBON® Standard  SOCIALCARBON®

- Gold Standard®  The Gold Standard
Premium quality carbon credits

- Climate, Community & Biodiversity (CCB) Standard Association  CCB Standards
The Climate, Community & Biodiversity Alliance

- Plan Vivo  Plan Vivo

- Of these four standards, Plan Vivo and CCB are applied to forestry projects, while the Gold Standard® and SOCIALCARBON® Standard have more project flexibility



Zé Eduardo of the Cavalcante Factory

SOCIALCARBON Standard

- SOCIALCARBON is a Standard developed by the Ecológica Institute (EI), a Brazilian NGO focused on climate change research and sustainable community development
- **Endorsed by ICROA** and designed to **strengthen co-benefits** of carbon offset projects 
- The SOCIALCARBON Methodology (SCM), which the **EI** developed in 2000, is the key element of the Standard
- SOCIALCARBON is used for monitoring co-benefits of offset projects. It is normally **combined with another standard**, such as **VCS** (Voluntary Carbon Standard), CAR (Climate Action Reserve) CDM, etc.



Canguçu Research Center, part of the Instituto Ecológica

Co – Benefits Standards

Co-Benefits Standards focus on bringing additional benefits to the location of a greenhouse gas emission reductions project

Aspects	SOCIALCARBON® Standard
Relation to Other Standards	<ul style="list-style-type: none"> • Monitors co-benefits of offset projects only, so it must be used in conjunction with a carbon-accounting standard (e.g. Voluntary Carbon Standard) • Integrates well with other standards • Is an “add-on” standard – a plus for carbon offset projects to improve the project’s sustainability.
Project Type Applicability	<ul style="list-style-type: none"> • Accept most projects activities. • Methodology has been applied for renewable energy, forestry, landfill and fuel-switching • Any type of project that could demonstrate an improvement in livelihoods is eligible

Aspects	SOCIALCARBON® Standard
Guarantee of Co-Benefits	<ul style="list-style-type: none"> • Project <u>must demonstrate continual improvement</u> or loses SOCIALCARBON® accreditation <ul style="list-style-type: none"> • If indicators decrease in score over two consecutive monitoring periods, the project loses its status • Improvement is assured through periodic monitoring of the project and independent verification by a DOE
Success depends on:	<ul style="list-style-type: none"> • The project developers and stakeholders commitment in improving the sustainability of the project



Workers at *Rio Negro*, a future Sustainable Carbon project in Iranduba, in the state of Amazonas, Brazil.

Concept & Philosophy

SOCIALCARBON Standard®

- Meant to be **flexible, focused on problem-solving** and consider the **priorities of local people** to find paths and perspectives on how to **improve the sustainability of the project**

SOCIALCARBON® lets Sustainable Carbon build a bridge by which all organizations can enter into and benefit from the carbon market to improve the livelihoods of project stakeholders.



Clockwise, from top-left: João tosses a sustainably-fired brick onto a truck to be sold in the local construction market, generating jobs; the opening where native firewood was fed into the kiln is now sealed and renewable biomass is poured in overhead; sunset in the Amazon

Measuring Sustainability with SOCIALCARBON®

- **Six sustainability aspects** measured over the 10-year lifetime of the project

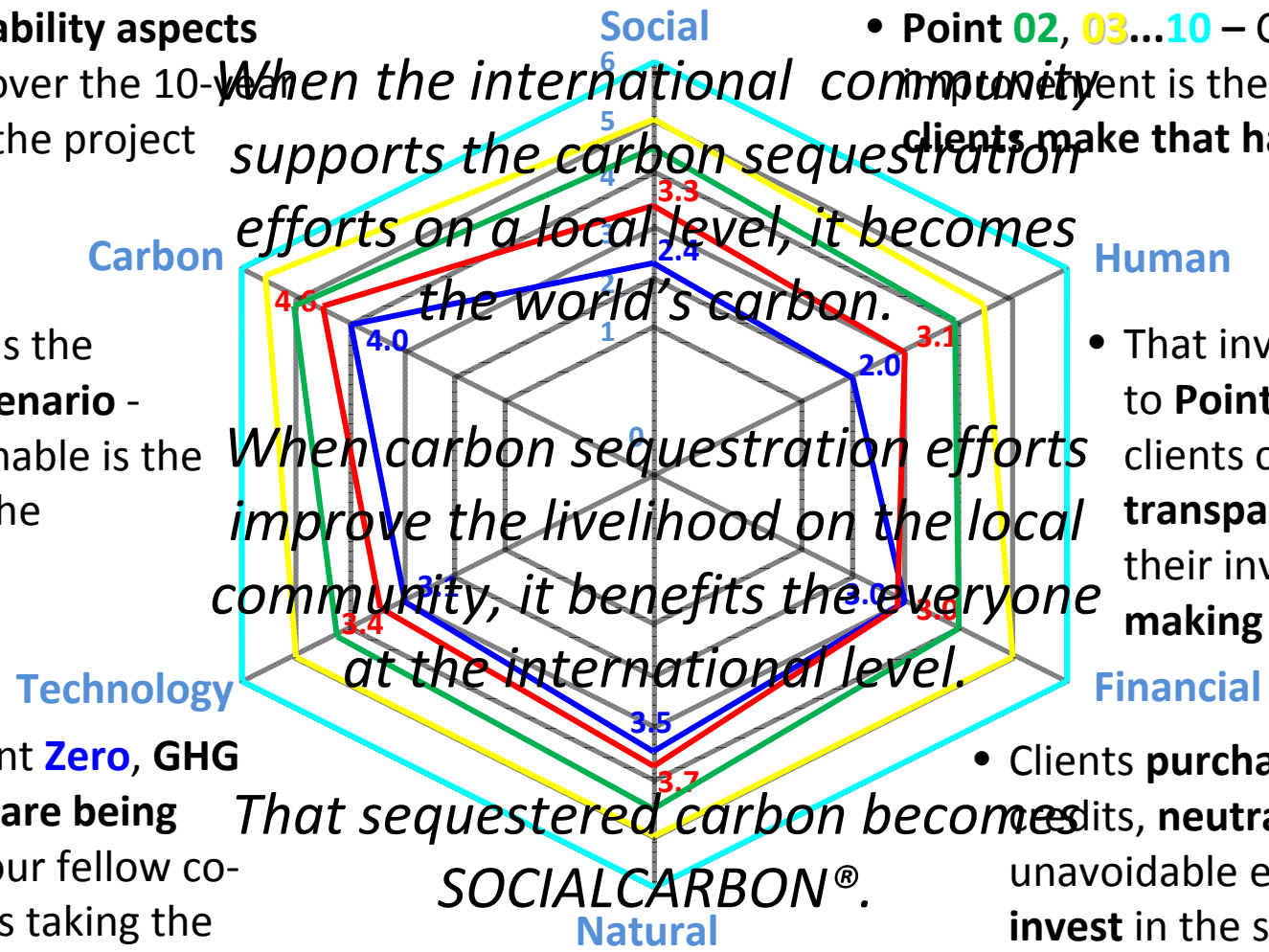
- Point **Zero** is the **baseline scenario** - how sustainable is the project at the beginning?

- Even at Point **Zero**, **GHG reductions are being realized** – our fellow co-developer is taking the initiative to **mitigate climate change**

- Point **02, 03...10** – Continual improvement is the goal, and clients make that happen

- That investment leads to **Point 01** whereby clients can **transparently** see their investment **making a difference**

- Clients **purchase** the carbon credits, **neutralize** their unavoidable emissions, and **invest** in the sustainability of the project



SOCIALCARBON® Case Study: Lucevans Ceramic Factory

Lucevans ceramic is a small business that produces ceramic products such as bricks and roof tiles for the local market around Panorama, São Paulo, Brazil. It is co-developed by **Sustainable Carbon**.

Key Points about the Project Location:

- Located in the Cerrado woodland-savanna, composing over 21% of Brazil.
- Cerrado is under threat from human expansion and agriculture
- Home to such animals like the giant anteater, giant armadillo and the jaguar

Key Points about the Project:

- One of the first fuel-switching projects under Sustainable Carbon's management
- Renewable biomasses used: sugar cane bagasse, sawdust, small wood residues and peanut shells
- The project is estimated to reduce approximately **85,031** tons of CO₂ equivalents during its ten year crediting period



Lucevans' SOCIALCARBON® Hexagon

Summary: Lucevans' Contribution to Sustainability

- Increased participation of women in the workforce since last report
- Low-rate of illiteracy at the workplace (13%)
- Increased automation of machinery has increased worker safety and health
- Truck has been acquired and the owner faces no difficulty in repaying the loan
- Entrepreneur has improved his communication with the employees about the carbon-reduction project
- Clay for use in products is sourced from an environmentally-responsible company

Social Resource

Current Analysis (2010)

- More women have been incorporated in the workforce (from 4 to 9 women in total)

Human Resource

Current Analysis (2010)

- Employees period doubling materials to local

Financial Resource

Current Analysis (2010)

- Organizations and financing Small Business (SEBRAE)

Natural Resource

- deep investment in Truck was purchased and there is no difficulty in paying off the loan

Technological Resource

- increased worker safety

- no formal environmental policy nor an environmental manager

- easily prove the origin of the materials

- however the factories renewable energy via vendors order

- some of the materials are being

- allows it to repair

- machine are planned at this moment

- Sources clay from an environmentally-responsible

- More emission reductions were generated than

- actually planned for, meaning a 104% accuracy of the

- estimated about of credits that were generated.

- The entrepreneur held a lecture to explain the carbon-

- quality control workshops with IPT, an organization that

- reduction project and its impact on the environment

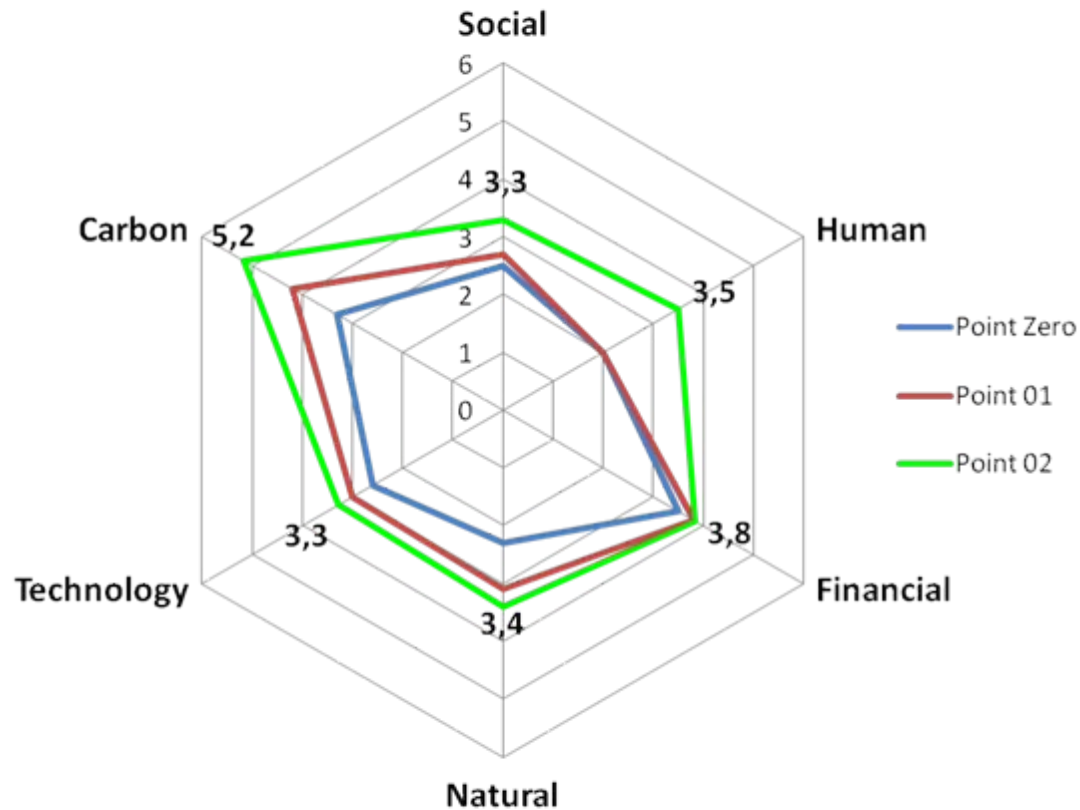
- helps improve the quality of goods in many sectors

- Future Improvements

- Work with INCOESP (Ceramic Industry Cooperative of

- Western São Paulo) to discuss ways to improve the

- project



ACCOUNT HOLDERS

REGISTERED PROJECTS

ISSUANCES/LISTINGS

HOLDINGS

RETIRED CREDITS

Search Registry Social Carbon Page 2

Project Name	Project Id	Project Type	Status	Developer	Validator	Origin	Documents
Maracá Ceramic Fuel Switching Project	MARACA VCS	Energy Industries - renewable/non-renewable sources	Active	Social Carbon Company	Bureau Veritas Certification Holding SAS	Brazil	View
Menegalli Ceramic Fuel Switching Project	MENEGALLVCS	Energy Industries - renewable/non-renewable sources	Issued	Social Carbon Company	Tuv Nord		
Menegalli Ceramic Switching Non-renewable Biomass Project	MENGALL1	Energy Industries - renewable/non-renewable sources	Issued	Social Carbon Company	BRTUV		
Milenium Ceramic Switching Non-renewable Biomass Project	MILENIUM	Energy Industries - renewable/non-renewable sources	Issued	Milenium	BRTUV		
Milenium Ceramic Switching Non-renewable Biomass Project	MILENIUMCERAMIC	Energy Industries - renewable/non-renewable sources	Issued	Milenium	Tuv Nord		
Nascente Ceramic Switching Fuel Project	NASCENTE VCS	Energy Industries - renewable/non-renewable sources	Issued	Social Carbon Company	Tuv Nord		
Nova Dutra, São Silvestre and Vila Nova Fuel Switching Project	ND_SS_VN_VCS	Energy Industries - renewable/non-renewable sources	Issued	Social Carbon Company	Tuv Nord		
Panorama Ceramic Fuel Switching Project	PANORAMA_VCS	Energy Industries - renewable/non-renewable sources	Issued	Social Carbon Company	Tuv Nord		
Por do Sol Ceramics Switching Fuel Project	PORDOSOLVCS	Energy Industries - renewable/non-renewable sources	Issued	Social Carbon Company	Tuv Nord		
Reunidas Ceramic Switching Non-renewable Biomass Project	REUNIDAS	Energy Industries - renewable/non-renewable sources	Issued	Reunidas	BRTUV	Brazil	View
Reunidas Ceramic Switching Non-renewable Biomass Project	REUNIDASVCS	Energy Industries - renewable/non-renewable sources	Issued	Reunidas	Tuv Nord	Brazil	View
Santorini Ceramic Fuel Switching Project	SANTORINIVCS	Energy Industries - renewable/non-renewable sources	Issued	Social Carbon Company	Tuv Nord	Brazil	View

Project Documentation - Mozilla Firefox

http://www.markitenvironmental.com/registryview.php

Project Documentation:
Maracá Ceramic Fuel Switching Project

- [Project Idea Note](#)
- [VCS Project Description](#)
- [Final Validation Report](#)
- [Monitoring Report](#)
- [Final Verification Report](#)
- [Maracá Social Carbon Report Point Zero](#)
- [Maracá Social Carbon Final Validation Report Point Zero](#)
- [Registration Deed](#)
- [Issuance Deed](#)

Concluído

(<http://www.markitenvironmental.com/registryview.php?pg=prj®id=3>)

Conclusion

Sustainable Carbon prefers the SOCIALCARBON® Standard because it:

- Is **inclusive**: any project that can demonstrate the potential to create better livelihoods is eligible
- Provides **transparency** as a methodology and SOCIALCARBON credits are listed in their own registry in the [Markit™ Environmental Registry](#)
- Is inline with our philosophy: **priorities of local stakeholders** are addressed and monitored throughout the lifetime of the project
- Provides our clients with the opportunity **to engage in** and **be responsible for** the **increase in the sustainability indices of the project**



A Brazilian fisherman going down the Amazon River

SUSTAINABLE CARBON



Gracias

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CLIMATE SOLUTIONS