



Ecosystem Marketplace



BRINGING IT HOME:

Taking Stock of Government
Engagement with the
Voluntary Carbon Market

By Molly Peters-Stanley

Forest Trends' Ecosystem Marketplace

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COMMISSIONED BY:



IETA
INTERNATIONAL EMISSIONS
TRADING ASSOCIATION



**Carbon Markets &
Investors Association**

EDITOR'S NOTES

Ecosystem Marketplace worked with the International Emissions Trading Association (IETA), the International Carbon Reduction and Offset Alliance (ICROA) and the Carbon Markets & Investors Association (CMIA) to produce this report. The subject of this report – national and sub-national engagement with voluntary carbon market mechanisms – is the topic of a series of high-level events convened by the industry associations that aim to benchmark national governments' attitudes toward the voluntary carbon market. The events, which coincide with the annual meeting of the United Nations Framework Convention on Climate Change Conference of Parties (UNFCCC COP), seeded the concept of regularly updating the carbon marketplace on the ongoing development of these public-private market relationships.

Through Ecosystem Marketplace's annual *State of the Voluntary Carbon Markets* reports – the world's most comprehensive and freely available resource documenting the volume, value and inner workings of the market for voluntary offset purchases – we have also discovered and continue to explore many of the patterns and preferences described in this report. The yearly research process that informs the *State of* report is exclusively funded by donations and sponsorships, while discrete reports such as this are currently unfunded. We felt, however, that the emerging domestic market trends visible in our *State of* findings, coupled with governments' expression of interest in greater transparency of their efforts, were significant enough to merit special exploration by our Carbon Markets team. Pending additional financial resources, Ecosystem Marketplace hopes to continue this line of inquiry.

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ABOUT FOREST TRENDS' ECOSYSTEM MARKETPLACE

Ecosystem Marketplace, an initiative of the non-profit organization Forest Trends, is a leading source of information on environmental markets and payments for ecosystem services. Our services include annual reports, quantitative market tracking, original articles and news aggregation. We believe that providing solid and trustworthy information on payments for ecosystem services and environmental markets can help these mechanisms better finance conservation... and keep the priceless valuable.

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SYMBOLS KEY

AGENCY TYPE

National government



Sub-national government



PROJECT TYPE

Forestry & Land Use



Transport



Energy



Methane



Industrial Gas



Other



BUYER SECTOR TYPE

Government



Manufacturing



Communication



Travel (incl. Air)



Energy



Industrial Processes



Individual/Community



Finance



ACKNOWLEDGEMENTS

Thank you to the following national or sub-national governments or their affiliates for providing Ecosystem Marketplace with **domestic program information**:

AUSTRALIA



www.lowcarbonaustralia.com.au

BRITISH COLUMBIA



Pacific Carbon Trust

www.pacificcarbontrust.com

CHINA



www.thji.org

COSTA RICA



ITALY



www.carbomark.org

JAPAN



www.4cj.org/jver/e/index.html

KOREA



www.kemco.or.kr/eng/

THE NETHERLANDS



<http://www.nationaalgroenfonds.nl/English/Paginas/default.aspx>

OKLAHOMA



www.conservation.ok.gov

OREGON



www.climatetrust.org

THAILAND



<http://www.tgo.or.th/english/>

UNITED KINGDOM



<http://www.forestry.gov.uk/carboncode>

Ecosystem Marketplace thanks the International Emissions Trading Association's International Carbon Reduction and Offset Alliance (ICROA) and the Carbon Markets & Investors Association (CMIA) – particularly **Jonathan Shopley** (Managing Director, The CarbonNeutral Company), **Edward Hanrahan** (Director, ClimateCare) and **Sophy Greenhalgh** (Programme Manager, ICROA) – for their catalysis and contributions. We are also grateful to **Andrea Welsh** from the Verified Carbon Standard for her valuable industry insights.

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Jay Gillette (British Columbia)

Stacy Hansen (Oklahoma)

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DEFINITIONS

• ADDITIONALITY

There are two general approaches to determine if reductions are additional to “business as usual” (from the VCS):

Standardized methods: under this category, **Performance methods** establish performance benchmark metrics for determining additionality and/or the crediting baseline. Projects that meet or exceed a pre-determined level of the metric may be deemed additional. **Activity methods** pre-determine additionality for given classes of project activities using a “**positive list**.” Projects that implement activities on the list are automatically deemed additional and don’t otherwise need to demonstrate it.

Project-based method: A project-based approach for determining additionality and/or the crediting baseline – traditional CDM approach.

• DOUBLE COUNTING

Double monetization: A voluntary reduction made within a capped sector “frees up” an allowance that can then cover additional domestic pollution or be sold to another country to cover its domestic pollution.

Double claiming (*could result from developing countries taking on national targets*): Developing country X makes a CO₂ reduction under the CDM (generating a CER credit) and claims the reduction against its national target. And then developed country Y buys same CER to cover its domestic emissions; claims attainment of national target.

Double selling: A voluntary reduction is verified to two different standards (i.e., VCS and Gold Standard) and sells the same reduction twice, or a singular reduction is sold to multiple buyers.

• INDEPENDENT VERSUS PROGRAM-SPECIFIC STANDARDS

Throughout this report we draw a distinction between carbon offset project standards and methodologies that are written and updated by the government programs themselves (“program specific”) and “independent” standards that are more broadly applicable in the voluntary carbon marketplace (like the Verified Carbon Standard, Gold Standard and others).

• PROGRAM PARTICIPANTS OR BUYERS

Our definition of Program Participants or Buyers includes organizations or companies buying carbon offsets that are generated or traded as a result of one of the programs or markets tracked in this report. This can include companies that set GHG targets and then adhere to national or sub-national guidance to meet those targets; organizations that utilize government-backed market mechanisms; and other types of participants according to each program.

• SUPPLIERS

Our definition of Offset Supplier includes any organization or company supplying carbon offsets at any point in the value chain – from offset project developers to wholesalers to brokers to retailers.

• TRANSACTIONS

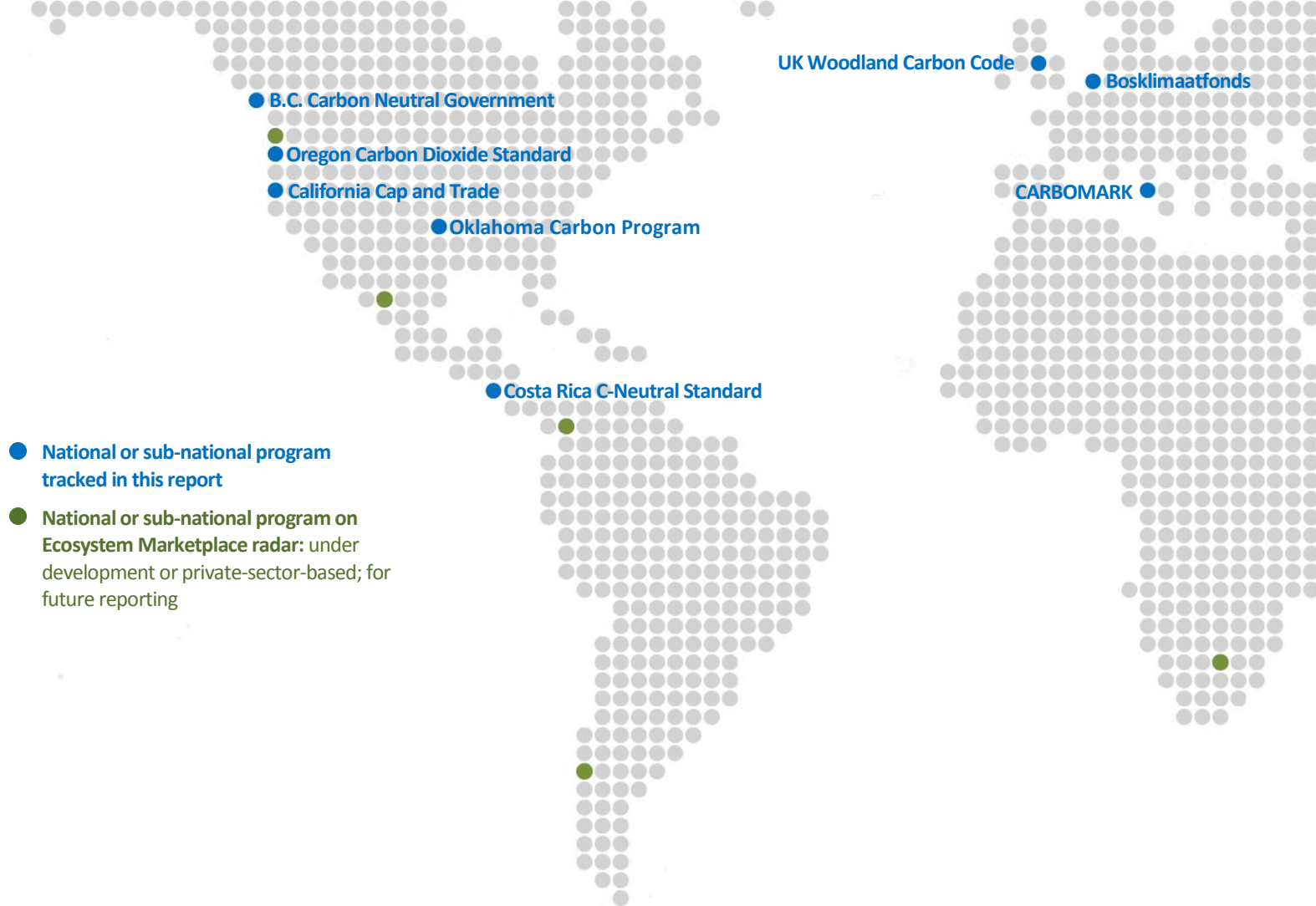
We track “transactions” at the point of contract, including contracts specifying future payment and credit delivery.

• VOLUNTARY CARBON MARKET

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

GLOSSARY

4CJ	Japan Certification Center on Climate Change
AAU	Assigned Amount Unit
ARB	California Air Resources Board
CDM/JI	Clean Development Mechanism/ Joint Implementation
CER	Certified Emission Reduction
CMIA	Carbon Markets & Investors Association
ERU	Emission Reduction Unit
EU ETS	European Emissions Trading Scheme
ICROA	International Carbon Reduction and Offset Alliance (<i>part of IETA</i>)
IETA	International Emissions Trading Association
IFM	Improved Forest Management
J-VER	Japan Verified Emission Reduction
KEMCO	Korea Energy Management Corporation
K-VER	Korea Verified Emission Reduction
MINAET	Costa Rica Ministry of Environment, Energy and Telecommunications
MOEJ	Japan Ministry of Environment
NCOS	National Carbon Offset Standard (Australia)
REDD	Reduced Emissions from Deforestation and Forest Degradation
RMU	Removal Unit
TGO	Thailand Greenhouse Gas Management Organization
T-VER	Thailand Verified Emission Reduction
UCC	Costa Rica Carbon Unit
UNFCCC	United Nations Framework Convention on Climate Change
VCM	Voluntary Carbon Market
VCS	Verified Carbon Standard
VER	Verified Emission Reduction



INTRODUCTION

Three years ago, the International Carbon Reduction and Offset Alliance (ICROA) and Carbon Markets & Investors Association (CMIA) convened a dialog between national governments and carbon market representatives to benchmark attitudes toward the voluntary carbon market.

The message was candid and clear: governments perceived a lack of market transparency, weak governance of existing standards and registries, and a poorly communicated product that confused consumers. Their suggested solutions ranged from implementing national guidance for carbon neutrality to discounting offsets in corporate reporting.

In December 2011, IETA and CMIA hosted a second *Voluntary and Compliance Carbon Markets Assembly*. In a few years' time, governments' tone had shifted from deeply critical to highly engaged in shaping demand for voluntary carbon offsetting – with seven governments newly active in the marketplace.

This latest event took place against the backdrop of the UNFCCC's 17th Conference of Parties (COP17) in Durban, South Africa – and as the dialog drew to a close, several government representatives left in haste to resume their role in negotiations.

But they left attendees with a pervading sense that voluntary demand for GHG emissions reductions – which once played on the margins of the regulated market under review in Durban –

also has an increasingly important role in the changing landscape of international climate actions.

The Markets in Context

A decade before the Kyoto Protocol enabled a multinational regulated carbon market, voluntary carbon offsetting originated on the forest frontier when the private sector began experimenting with conservation and climate action credits. Back then, few carbon accounting standards or other market mechanisms were available to the private sector.

When regulated carbon markets like the Clean Development Mechanism (CDM) emerged with “compliance-grade” standards in tow, emerging voluntary mechanisms were relegated to the fringe – spinning off innovations but also controversies regarding their effectiveness and permanence.

Over the years, standards and registries that guide and track voluntary GHG reductions have multiplied and matured around their message that voluntary mechanisms are as rigorous as their compliance market counterparts, and arguably more innovative. Many voluntary actors now aim to dispense with distinctions between voluntary and “compliance-grade” offsets as they scramble to write the rules that will fill various regulatory vacuums – like that which some nations will face until 2020, when they may join in a new international legal framework for GHG mitigation.



Shifting Perspectives

In the mean time, some voluntary market actors’ attempts to integrate voluntary and regulated market mechanisms are paying off, as governments evaluate some previously marginalized voluntary carbon market mechanisms to potentially lay the groundwork for domestic GHG regulation.

Governments’ emerging use of private-sector tools to meet national and sub-national climate aims partly stems from the influence of early regional actors (like South Korea and Oregon – see pages 13 and 5); organizations like Japan’s Institute for Global Environmental Strategies (IGES); and international development multilaterals.

For example, this report documents actions in three of the fifteen countries that joined the World Bank’s Partnership for Market Readiness (China, Costa Rica, Thailand) – another six (Brazil, Chile, Colombia, Indonesia, Mexico, South Africa) could leverage voluntary carbon market mechanisms to supplement or underpin future regulations. We also track formal recognition of voluntary actions among five of ten Fund contributors (Australia, Japan, Netherlands, UK, US).

Government engagement with voluntary carbon market mechanisms is nothing new – programs tracked in this report date back to 1997. But in contrast to a few years ago, when governments viewed market oversight as their primary role in the voluntary carbon market, they are increasingly turning to private sector mechanisms to deliver reductions on par with regulated instruments like the CDM; to address emissions

sources neglected by current market frameworks; to enhance domestic companies’ supply chain competitiveness; and/or to reduce the cost to operate a domestic market by outsourcing some functions.

About the Case Studies

ICROA and CMIA enlisted Ecosystem Marketplace to document this rapid shift in government attitudes and emerging government-managed voluntary carbon market oversight and trading programs.

The following thirteen case studies emerge from a survey that Ecosystem Marketplace distributed to governments that have developed or are developing domestic voluntary carbon markets, or that back the use of independent standards or registries that originated in the voluntary carbon market.

The first page of each case study introduces the government program or effort, and describes **program design** (the governments’ role in the marketplace, use of various mechanisms, regulatory context, etc.). The second page describes the **program results** – as reported by governments or their affiliates – including domestic demand and supply generated as a direct result of the policy or program.

This report casts a wide net across government programs in order to set a baseline for future inquiry – it is by no means exhaustive. We do not describe private sector programs or early-stage initiatives being tested or considered in Chile, Colombia, South Africa and other regions – but hope to do so in the future.

EXECUTIVE SUMMARY

Government attitudes toward the (typically) private sector- and NGO-driven market for voluntary carbon offsetting have shifted rapidly over the years – from apprehension to relative acceptance to active marketplace engagement.

In the 12 year span of 1997 to 2009, seven national and sub-national governments implemented programs that drove demand or offered guidance for domestic voluntary carbon offsetting. In the *four* years from 2009 to 2013, another nine programs have emerged or are expected to launch.

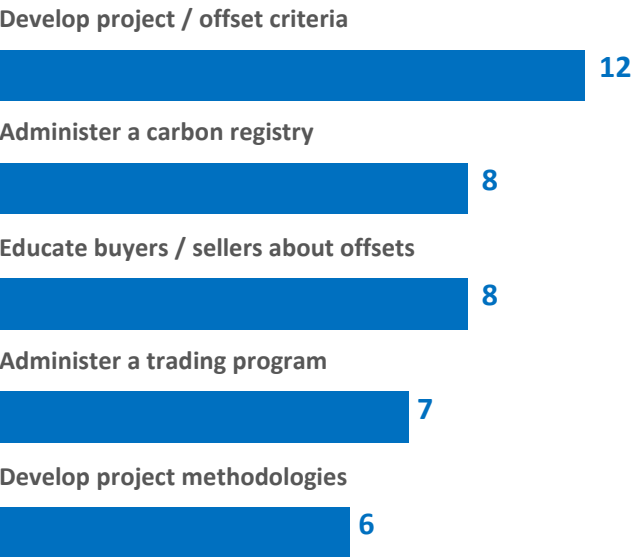
To document how governments are engaging with the voluntary carbon offset market, we surveyed governments that met the following criteria: 1) the program is government-initiated or – administered; 2) and/or the program recognizes for use existing voluntary carbon market mechanisms or develops or certifies its own market tools; 3) and/or the program facilitates voluntary offset trading, project development or carbon neutral pledges.

Based on this survey, we are able to track thirteen government programs or efforts at a comparable level of detail. While these programs’ market functions vary slightly from one to the next, they all fit one of two **MARKET TYPES** (either *voluntary* or *driven by regulation*). In Figure 1, we have also identified programs’ **MARKET MECHANISM TYPES** – where they fall on a spectrum of leveraging *external market mechanisms* or developing *program-specific mechanisms*.

Governments’ Primary Market Roles: Criteria Setting and Market Tracking

Rule-making is a primary function of government intervention in any marketplace – so it’s not surprising that almost all government programs define what credits are acceptable for sale or use among program participants. Over half of domestic government programs also write their own methodologies, and so administer a program-based registry to issue and track program-specific domestic credits.

FIGURE 2: Governments’ Primary Voluntary Carbon Market Functions (by program count)



Government Programs Saw 6.3 MtCO₂e Transacted in 2011

Survey respondents reported a total **6.3 MtCO₂e** transacted as a result of their programs or guidance in 2011. This equates to **11% of the total volume of credits voluntarily transacted over-the-counter worldwide**, as of Ecosystem Marketplace’s 2011 *State of the Voluntary Carbon Markets* report.

We consider this number to be conservative – our 2012 *State of the Voluntary Carbon Markets* report survey has already tracked a greater volume of offsets transacted for pre-compliance purposes in California than were reported by survey respondents.

Governments also anticipate that from 2012-2015, another **48 MtCO₂e** will be transacted as a result of their programs.

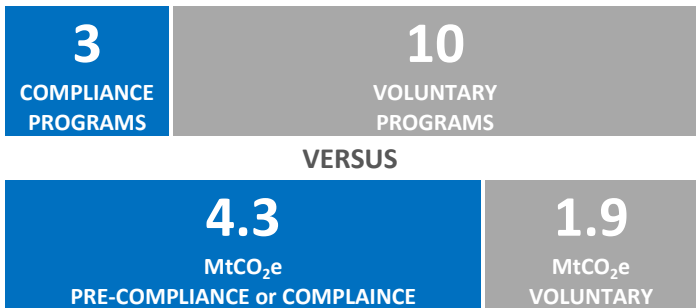
FIGURE 1: Spectrum of Government-driven Offset Markets, 2011



Compliance: Primary Domestic Demand Driver

In 2011 and also through 2015, governments report that **70 percent** of transactions stem from domestic preparation for or compliance with a national cap and trade program – from California’s newly launched cap and trade program to South Korea’s pending national program.

FIGURE 3: Number of Voluntary and Compliance-Based Government Programs AND Volume of Credits Transacted from Each Program Type, 2011



Programs Exclusively Target Domestic Buyers

While some governments recognize credits from international projects, government directives and regulation are focused on **domestic buyers only**. This includes developing countries that are preparing domestic companies for national targets (Costa Rica) and developed countries (US states) that recognize offsets verified to independent standards for compliance use. Purely voluntary programs encourage domestic forestry (European programs), guide carbon neutral claims (Australia), and support domestic competitiveness (Italy). Reflecting larger programs’ pre-compliance nature, demand came largely from the energy, government and manufacturing sectors in 2011.

Volume-weighted Average Price of \$11/tCO₂e: the Higher Price of Home

Governments reported a volume-weighted average price of **\$11/tCO₂e for credits adhering to their program guidance**. In other words, companies are willing to pay twice the global average price (\$6/tCO₂e) of voluntary offsets, to purchase

domestic government programs’ offsets. Why? Their benefits connect with local clients and employees, the purchase “connects” companies to government goals, and the offsets from some government-backed programs are considered to be lower risk than those in the marketplace. This price also reflects the higher and more stable pricing of offsets in the regional pre-compliance markets.

Largest Transaction Volumes from Independent Standards

Governments recognizing the use of **independent standards** (like the VCS) spurred the majority of transactions in 2011 (72%), owing to larger available supply coupled with pre-compliance motivations. The eight locations that developed **program-specific methodologies** for voluntary projects saw a lesser 1.9 MtCO₂e transacted as a result of their programs, which in most cases administer in-house registries, certification and credit issuance. We also tracked a growing preference for **standardized approaches** to additionality – using tools like “positive lists” instead of traditional project-by-project assessments to determine project eligibility. Those governments found standardized methods to be more efficient and easier to administer than traditional methods.

Program Design Reflects Regional Trends

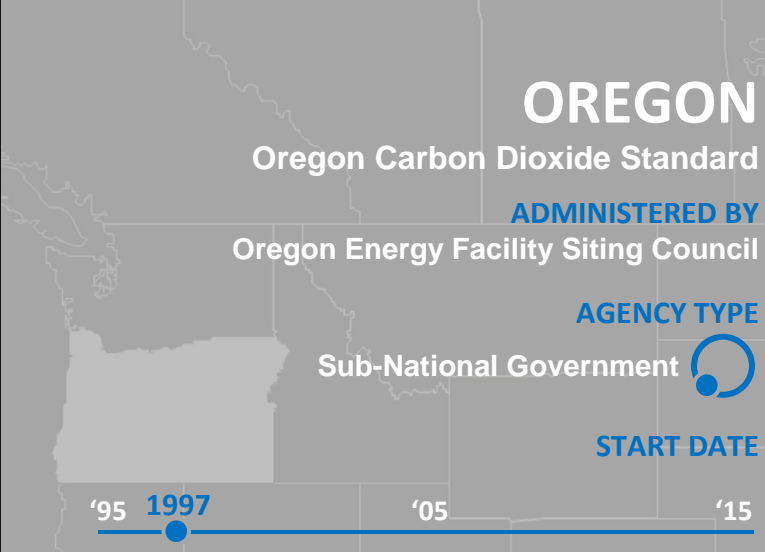
As seen in **FIGURE 1**, government programs have a **pronounced regional design**. Asian programs responded to government preferences for strictly domestic programs, and reflect the designs of early movers like Korea and Japan. In North America, Oregon’s Climate Trust heavily influenced the development of early U.S. market mechanisms, including California’s California Climate Action Registry (now simply the Climate Action Reserve) – that in turn influenced other states and provinces.

Programs with similar designs encounter similar challenges. For example, voluntary domestic programs within countries with international climate commitments all encounter **regulatory overlap** to some degree – meaning that governments are ultimately responsible for GHG reductions in some sectors, *with or without* voluntary action.

How governments address this and other unique regulatory issues is explored in the following case studies.

MARKET TYPE: VOLUNTARY

<ul style="list-style-type: none">• Korea, Japan and Thailand Voluntary Emissions Reduction Programs• China Green Carbon Foundation• UK Woodland Carbon Code• Italian CARBOMARK program	<ul style="list-style-type: none">• Costa Rica C-Neutral Standard	<ul style="list-style-type: none">• Australia National Carbon Offset Standard• Netherlands’ Bosklimaatfonds
Program-specific standard(s)/registry/exchange	Mix, program-specific and independent standard(s)/registry/exchange	Independent standard(s)/registry/exchange



Long before Kyoto Protocol-based GHG markets existed, Oregon legislators established the first law in the US regulating CO₂ emissions. The Oregon CO₂ Standard set an emissions benchmark for new energy facilities and also allows the use of offsets for compliance.

In 2001, the program's first offset contract was inked by The Climate Trust, the standard's qualified not-for-profit offset supplier. At that time, the voluntary carbon market was barely a concept – requiring The Climate Trust to directly engage with and cultivate new projects while also facilitating methodology development and certification.

As market mechanisms emerged mid-decade, The Climate Trust welcomed independent standards, which it also helped shape. Says The Climate Trust's Erica Keeley, "Third-party standards are peer-reviewed and vetted by a larger audience than a single author, so you have more expertise to draw upon." So far, The Climate Trust has contracted over 2.1 MtCO₂e of offsets on behalf of the state's regulated facilities.

PROGRAM ACTIVITIES

TRAINING AND CERTIFICATION

Trains and/or approves certifiers

Validates projects, verifies and/or issues credits

PROJECTS and MECHANISMS

Develops projects

Establishes eligible project criteria

Provides technical assistance for projects

Operates a program-specific registry

Develops project methodologies

Approves independent VCM mechanisms for use

BUYERS

Educates buyers about carbon offsetting

Tracks participants' GHG reductions, including offset purchases

Provides recognition for buyers of program-approved carbon credits

MARKET MECHANISMS

APPROVED STANDARDS OR PROTOCOLS

The Council does not endorse specific standards or protocols. The Climate Trust has retired various programs' VERs and CRTs from **Climate Action Reserve** projects.

APPROVED REGISTRIES

Internal, program-administered registry for facility emissions – no restriction on independent carbon registries.

APPROVED CERTIFICATION PROGRAMS/ CERTIFIERS

No restriction on accreditation. All offsets must be third-party verified.

LEGAL CONTEXT

PROGRAM: VOLUNTARY OR REGULATORY?

REGULATORY

OVERLAP WITH EXISTING GOVERNMENT GHG TARGETS

YES

NO

OVERSIGHT AND ADMINISTRATION

The Energy Facility Siting Council has operated within Oregon's Dept. of Energy since 1975, and administers the CO₂ Standard. Regulated facilities may elect to have The Climate Trust acquire offsets on their behalf.

ENABLING DOCUMENTS

Statutory authority for the CO₂ standard is found in ORS 469.503: <http://www.leg.state.or.us/ors/469.html>.

The standards and applicable rules are found in the Oregon Administrative Rules, Chapter 345, Division 24.

ACCEPTED PROJECT TYPES



- Afforestation / Reforestation
- Improved forest management
- REDD



- Biomass
- Energy efficiency



- Landfill methane
- Coal mine methane
- Waste water methane

OTHER

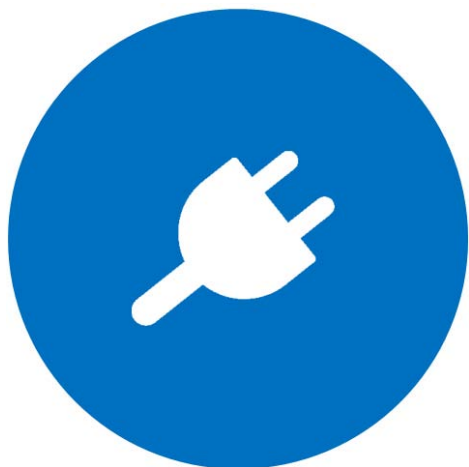
- Fuel switching
- N₂O
- Transportation



ADDITIONALITY:
Preference for standardized methods

DOMESTIC DEMAND

BUYER SECTORS (CURRENT)



VOLUME TRANSACTED: 2011

73,225 tCO₂e

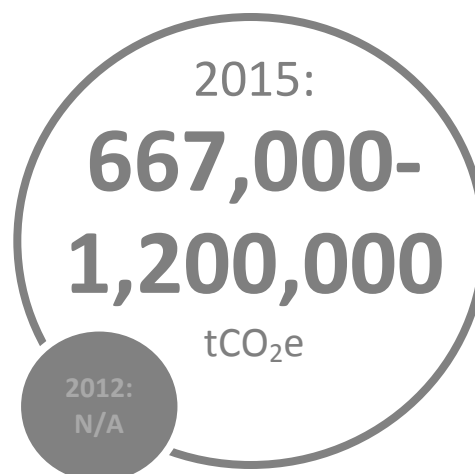
NUMBER OF BUYERS (PARTICIPANTS): 2011

5

Under the Oregon Standard, regulated facilities can pursue internal CO₂ abatement or purchase offsets directly or through The Climate Trust. The Climate Trust currently sources offsets for five regulated facilities.

SUPPLY + PROJECTIONS

CURRENT SUPPLY: 2012 / EXPECTED PURCHASES '12-'15



EXISTING PROJECTS	NOT APPLICABLE
PROJECT PIPELINE THROUGH 2017	NOT APPLICABLE
NUMBER OF PARTICIPATING/ ELIGIBLE OFFSET SUPPLIERS	NOT APPLICABLE

FUNDING AND FEES

PRICE PER CREDIT/ CERTIFICATE <i>as of January 2012</i>	\$6 - \$9 <i>per tCO₂e in USD</i>
WHO SETS THE PRICE?	MARKET
PROGRAM FEES	Facilities acquiring offsets via The Climate Trust provide \$1.27 per tCO ₂ emitted above a performance benchmark of 0.675 lbs-CO ₂ /kWh.
OTHER PROGRAM FUNDING SOURCES	All program funding is provided by new or expanding fossil fuel-powered facilities.

OUTLOOK

The Climate Trust sources offsets for both the Oregon CO₂ Standard and a similar program in Washington State – the Washington Carbon Mitigation Policy.

For both programs combined, the Climate Trust is tasked with purchasing an additional \$6.3 million worth of credits under existing compliance obligations. The Climate Trust prefers, but is not required, to channel the money into projects within Oregon or Washington states.

Both states' regulations continue to be applied to new energy facility sites. In addition, The Climate Trust continues to engage with other states and municipalities considering a similar model.

RESOURCES AND LINKS

VIEW THE RELEVANT OREGON ADMINISTRATIVE RULE: <http://www.oregon.gov/ENERGY/SITING/docs/rules/div24.pdf>

VISIT THE CLIMATE TRUST WEBSITE: <http://www.climatestrust.org/>

BACKGROUND INFORMATION ON THE OREGON CO₂ STANDARD: <http://www.rnp.org/node/index.php?q=node/875>



When the California Air Resources Board (ARB) decided to draw on voluntary carbon programs' experience with offset markets, it had the benefit of hindsight.

It knew what works for ensuring adequate offset supply – like including national and international projects – and what's not as efficient. Like, having to review numerous protocols for project development, each with their own emissions baseline scenarios.

To avoid this, regulators opted to use “performance standards” to establish a *generic* emissions scenario against which all reductions in a sector or region are weighed. “By setting a performance standard approach, you only need to adopt one protocol for a project type,” says ARB's Rajinder Sahota, “instead of reviewing twenty different protocols for one project type.” The Reserve's four methodologies so far approved by the ARB take this approach to additionality – as do some elements of the American Carbon Registry (ACR) and Verified Carbon Standard (VCS) programs.

PROGRAM ACTIVITIES

TRAINING AND CERTIFICATION

Trains and/or approves certifiers	✓
Validates projects, verifies and/or issues credits	

PROJECTS and MECHANISMS

Develops projects	
Establishes eligible project criteria H	
Provides technical assistance for projects	
Operates a program-specific registry	
Develops project methodologies	✓
Approves independent VCM mechanisms for use	✓

BUYERS

Educates buyers about carbon offsetting	
Tracks participants' GHG reductions, including offset purchases	
Provides recognition for buyers of program-approved carbon credits	

MARKET MECHANISMS

APPROVED STANDARDS OR PROTOCOLS

California has adapted and approved for compliance purposes four **Climate Action Reserve** protocols. Other independent programs are currently and will continue to be considered for adoption.

APPROVED REGISTRIES

To be determined

APPROVED CERTIFICATION PROGRAMS/ CERTIFIERS

To be determined

LEGAL CONTEXT

PROGRAM: VOLUNTARY OR REGULATORY?	REGULATORY	
OVERLAP WITH EXISTING GOVERNMENT GHG TARGETS	YES	NO

OVERSIGHT AND ADMINISTRATION

The California Air Resources Board sits within the state's Environmental Protection Agency. In 2006, Assembly Bill 32 directed the ARB to develop actions to achieve state-wide GHG reductions and credit companies' early actions. ARB's resulting plan includes a cap and trade program that relies on existing VCM infrastructure.

ENABLING DOCUMENTS

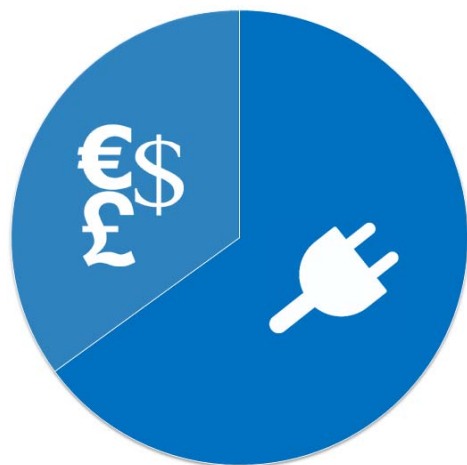
Final regulation (as of Jan. '12, offset provisions in Sub-article 13): <http://www.arb.ca.gov/regact/2010/capandtrade10/finalrevfro.pdf>

ACCEPTED PROJECT TYPES

	<ul style="list-style-type: none"> Improved Forest Management Urban Forestry REDD (possible, after 2015)
	<ul style="list-style-type: none"> Livestock Methane
	<ul style="list-style-type: none"> Ozone Depleting Substance Destruction
	ADDITIONALITY: Standardized method

DOMESTIC DEMAND

BUYER SECTORS (CURRENT)¹



VOLUME TRANSACTED: 2011¹

3,000,000 tCO₂e

NUMBER OF BUYERS (PARTICIPANTS): 2011

UNKNOWN

About 350 businesses (600 facilities) in California will have direct obligations under the state's compliance program that can be partially met with offsets.

SUPPLY + PROJECTIONS

CURRENT SUPPLY: 2012 / EXPECTED SUPPLY: '12-'15



EXISTING PROJECTS	42 Projects currently in pipeline ¹
PROJECT PIPELINE THROUGH 2017	
NUMBER OF PARTICIPATING/ ELIGIBLE OFFSET SUPPLIERS	UNKNOWN

FUNDING AND FEES

PRICE PER CREDIT/ CERTIFICATE <i>as of January 2012</i>	\$6 - \$10.5 <i>per tCO₂e in USD</i>
WHO SETS THE PRICE?	MARKET
PROGRAM FEES	General project costs, ongoing verification, registry fees: VARIES
OTHER PROGRAM FUNDING SOURCES	NONE

OUTLOOK

The California cap and trade program officially began in 2012, with its compliance component beginning in 2013. By that time, fellow Western Climate Initiative member Quebec is expected to launch its own provincial scheme, which will likely link with California. Whether linked with Quebec or not, analysts expect that the majority of the California program's GHG abatement will stem from offset use.

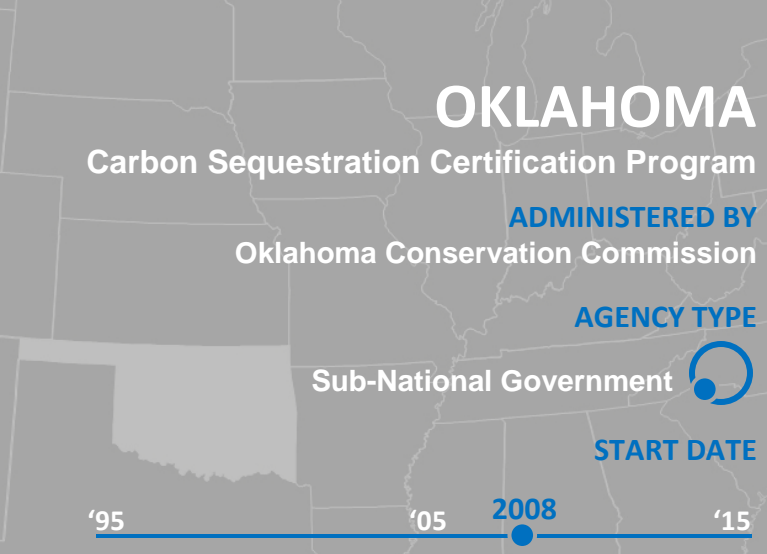
Given that, supply is of primary concern to regulators, who are already reviewing existing independent programs (like the Reserve and ACR) to identify additional protocols that may be fit for adoption. As it stands, Thomson Reuters Point Carbon estimates that 32 MtCO₂e offsets will be available to the program from 2012-2015 if regulators decide to accept international REDD credits – or 16 MtCO₂e if it does not.

RESOURCES AND LINKS

¹**THANKS TO THOMSON REUTERS POINT CARBON:** For providing the above transaction and supply volumes, and pricing

AIR RESOURCES BOARD CAP AND TRADE WEBSITE: <http://www.arb.ca.gov/cc/capandtrade/capandtrade.htm>

COMPLIANCE OFFSET PROTOCOLS: <http://www.arb.ca.gov/cc/capandtrade/offsets/offsets.htm>



One decade ago, Oklahoma decision makers took early steps to prepare for the emerging Chicago Climate Exchange (CCX) and then-anticipated federal cap-and-trade legislation. In 2001, the legislature approved the nation’s first law giving a state agency statutory authority to verify carbon credits. By the time CCX credit prices peaked in 2007, Oklahoma began developing rules for a state-wide voluntary carbon program.

And when the CCX program ended and federal legislation didn’t materialize, Oklahoma retained elements of the CCX that made sense – like approving verifiers and focusing on agricultural soil carbon sequestration rates. But to retain local buy-in at a time when many in the US are disenchanted with carbon markets, director Stacy Hansen says the program message and benefits had to be Oklahoma-facing.

“We stress that agriculture is the heart of Oklahoma, and that this program benefits both ag producers *and* natural resources. People appreciate our non-regulatory approach.”

PROGRAM ACTIVITIES

TRAINING AND CERTIFICATION

Trains and/or approves certifiers	✓
Validates projects, verifies and/or issues credits	✓

PROJECTS and MECHANISMS

Develops projects	
Establishes eligible project criteria	✓
Provides technical assistance for projects	✓
Operates a program-specific registry	✓
Develops project methodologies	✓
Approves independent VCM mechanisms for use	✓

BUYERS

Educates buyers about carbon offsetting	✓
Tracks participants’ GHG reductions, including offset purchases	
Provides recognition for buyers of program-approved carbon credits	✓

MARKET MECHANISMS

APPROVED STANDARDS OR PROTOCOLS

The Oklahoma Carbon Program offers state-specific methodologies for program use. Other carbon standards have been and will be considered for use, but so far only **program-specific methodologies** have been utilized.

APPROVED REGISTRIES

Internal, program-administered registry

APPROVED CERTIFICATION PROGRAMS/ CERTIFIERS

Utilizes state-trained or approved verifiers only

LEGAL CONTEXT

PROGRAM: VOLUNTARY OR REGULATORY?	VOLUNTARY	
OVERLAP WITH EXISTING GOVERNMENT GHG TARGETS	YES	NO

OVERSIGHT AND ADMINISTRATION

The Oklahoma Carbon Program is housed within the Oklahoma Conservation Commission’s Water Quality Division. The Conservation Commission administers aggregator and verifier approval, verifier training, project verification/certification and methodology development.

ENABLING DOCUMENTS

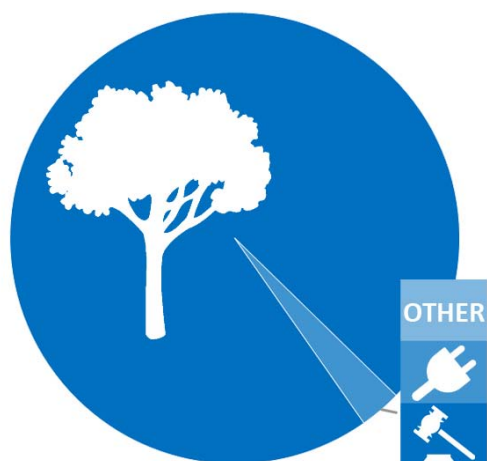
Oklahoma Carbon Sequestration Enhancement Act Originally added in 2001 legislative session; Amended 2011. Offset provisions found in OK Administrative Code Title 155: 27A O.S. § 3-4-101 thru 3-4-105.

ACCEPTED PROJECT TYPES

	<ul style="list-style-type: none"> Afforestation / Reforestation Improved forest management Conservation tillage Rangeland management Grassland management
OTHER	<ul style="list-style-type: none"> Geologic sequestration
	ADDITIONALITY: Standardized method

DOMESTIC DEMAND

BUYER SECTORS (CURRENT)



VOLUME TRANSACTED: 2011

26,100 tCO₂e

NUMBER OF BUYERS (PARTICIPANTS): 2011

1 BUYER

So far, Oklahoma program projects have found buyers ahead of project implementation.

SUPPLY + PROJECTIONS

CURRENT SUPPLY: 2012 / EXPECTED SALES '12-'15



EXISTING PROJECTS	4
PROJECT PIPELINE THROUGH 2017	5
NUMBER OF PARTICIPATING/ ELIGIBLE OFFSET SUPPLIERS	2 AGGREGATORS

FUNDING AND FEES

PRICE PER CREDIT/ CERTIFICATE <i>as of January 2012</i>	\$3.50 <i>per tCO₂e in USD</i>
WHO SETS THE PRICE?	MARKET
PROGRAM FEES	Field verification: \$30/hour + expenses; Document verification: \$50/hr or \$15/well ; State certification per tCO ₂ e: \$0.03-\$0.10 cents, not to exceed \$10,000 per application
OTHER PROGRAM FUNDING SOURCES	Grants , including a FY-2011 USDA Natural Resources Conservation Service Conservation Innovation Grant

OUTLOOK

In December 2011, the Oklahoma Carbon Program arrived on the Ecosystem Marketplace radar when it was announced that 50,000 acres of Oklahoma ranch, farm, and forest land were enrolled to be verified by the voluntary program.

In the coming year, Hansen says the program focus will be on completing and peer-reviewing its draft verification methodologies, fine tuning its verifier training program, and moving forward with what it has learned from its pilot. It is also working with Oklahoma State University to develop a soil sampling method for field verifiers. While verification is turning more to modeling, Oklahoma's methods continue to focus on field-scale data gathering. The program is set up to stand alone or to provide verification of Oklahoma carbon offsets for other programs. The Oklahoma program is interested in pursuing accreditation by ANSI, which is required to be a verifier for the larger programs – but so far the cost has been prohibitive, says Hansen. The program welcomes partnership inquiries.

RESOURCES AND LINKS

VIEW ENABLING LEGISLATION: http://www.ok.gov/conservation/Agency_Divisions/Water_Quality_Division/WQ_Carbon_Sequestration/Legislation/WQ_Carbon_Sequestration_Enhancement_Act.html

OKLAHOMA CARBON PROGRAM WEBSITE: http://www.ok.gov/conservation/Agency_Divisions/Water_Quality_Division/WQ_Carbon_Sequestration/About_the_Program/index.html

BRITISH COLUMBIA

Carbon Neutral Government

ADMINISTERED BY
British Columbia Ministry of Environment

AGENCY TYPE

Sub-National Government

START DATE

'95 '05 2008 '15

When the government of British Columbia committed to carbon neutrality, it did so via self-imposed regulations – and with the aid of voluntary carbon market mechanisms.

To source compliance offsets, BC established the crown corporation Pacific Carbon Trust (PCT), where the provincial government is the corporation's shareholder. Under its Pacific Carbon Standard, the Trust purchases offsets according to the BC Emission Offset Regulation (EOR). The EOR is also structured to allow protocols developed to international standards – like the Canadian Darkwoods forest management protocol verified to VCS that sold 405,000 tCO₂e to the BC government via the Trust in 2011. PCT employs the Markit registry to transfer and retire credits on behalf of government and private client buyers.

While private clients purchased less than 10,000 tCO₂e of Pacific Carbon Standard offsets, the Trust hopes to grow overall demand for BC offsets in 2012, in pursuit of its government mandate to expand BC's low carbon economy.

PROGRAM ACTIVITIES

TRAINING AND CERTIFICATION

Trains and/or approves certifiers

Validates projects, verifies and/or issues credits

PROJECTS and MECHANISMS

Develops projects

Establishes eligible project criteria

Provides technical assistance for projects

Operates a program-specific registry

Develops project methodologies

Approves independent VCM mechanisms for use

BUYERS

Educates buyers/public about carbon offsetting

Tracks participants' GHG reductions, including offset purchases

Provides recognition for buyers of program-approved carbon credits

MARKET MECHANISMS

APPROVED STANDARDS OR PROTOCOLS

The Pacific Carbon Trust's **Pacific Carbon Standard** features original methodologies and some independent standard methodologies adapted to meet BC Emission Offsets Regulation criteria. PCT also evaluates the eligibility of local projects verified to international standards (like **VCS**). Eligible projects sell credits to the Trust, which it then sells on to government.

APPROVED REGISTRIES

Markit Environmental Registry

APPROVED CERTIFICATION PROGRAMS/ CERTIFIERS

Validators and verifiers must be ANSI- and/or SCC-certified

LEGAL CONTEXT

PROGRAM: VOLUNTARY
OR REGULATORY?

REGULATORY

OVERLAP WITH
EXISTING
GOVERNMENT GHG
TARGETS

YES

NO

OVERSIGHT AND ADMINISTRATION

BC's Carbon Neutral Government initiative is formally administered by the BC Ministry of Environment. Pacific Carbon Trust, administers program guidance, takes title of any compliant offsets generated, and sells them to government and voluntary buyers.

ENABLING DOCUMENTS

The Greenhouse Gas Reduction Targets Act of 2007 set legislated GHG targets, and authorized Emissions Offset Regulations and Carbon Neutral Government scheme.

ACCEPTED PROJECT TYPES



- Any, except REDD



- Any, except large hydropower



- Any methane technology

OTHER

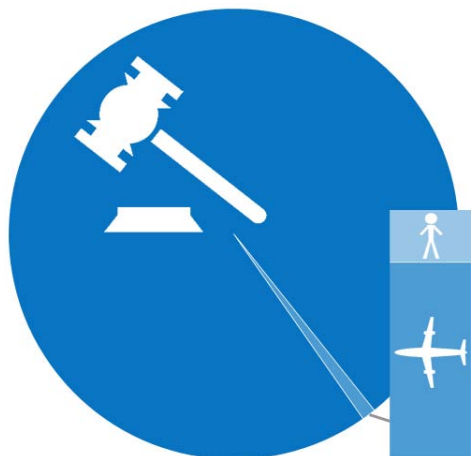
- Fuel switch and fugitive emissions
- N₂O
- Transportation



ADDITIONALITY:
Project-based method

DOMESTIC DEMAND

BUYER SECTORS (CURRENT)



VOLUME TRANSACTED: 2011

800,000 tCO₂e

NUMBER OF BUYERS (PARTICIPANTS): 2011

150

The majority of B.C. offset buyers are government entities. In 2012, however, the Trust intends to more actively pursue its other mandate to “grow the low carbon economy” via voluntary market engagement.

SUPPLY + PROJECTIONS

CURRENT SUPPLY: 2012 / EXPECTED SALES ‘12-‘15



EXISTING PROJECTS	27
PROJECT PIPELINE THROUGH 2017	UNKNOWN
NUMBER OF PARTICIPATING/ ELIGIBLE OFFSET SUPPLIERS	19

FUNDING AND FEES

PRICE PER CREDIT/ CERTIFICATE <i>as of January 2012</i>	\$25 <i>per tCO₂e in USD</i>
WHO SETS THE PRICE?	PROGRAM
PROGRAM FEES	There are no program fees
OTHER PROGRAM FUNDING SOURCES	Offsets program (through Pacific Carbon Trust) funded solely by fees obtained from sales to government organizations and private clients

OUTLOOK

PCT will continue to administer the compliance offsets component of BC’s Carbon Neutral Government program, and the crown corporation foresees expanding demand for BC offsets in the voluntary carbon market in 2012. “The government’s compliance demand for offsets is expected to remain stable or decline slightly in coming years,” explains the PCT’s Jay Gillette. “Additional growth will come through expansion of government policies, linkages to other compliance markets and growth of voluntary markets.”

Along this line, the Pacific Carbon Trust has invested in several strategies to increase demand and value for BC offsets. Outreach programs, such as partnering with Climatesmart, a provider of carbon tracking and training, aims to spread awareness of carbon emissions and reduction strategies among businesses. PCT also stays in close contact with the VCS to pursue market fungibility: “It would be ideal for the project proponent to be able to sell ongoing vintages into the voluntary market, to support GHG reductions beyond what the government needs for compliance,” says Gillette.

RESOURCES AND LINKS

VIEW ENABLING LEGISLATION: http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/00_07042_01

VIEW BC EMISSIONS OFFSET REGULATION: http://www.env.gov.bc.ca/cas/mitigation/ggrrta/offsets_reg.html

VISIT THE PACIFIC CARBON TRUST WEBSITE: <http://www.pacificcarbontrust.com/>

REPUBLIC OF KOREA

Verified Emissions Reduction Program (KVER)

ADMINISTERED BY
Korea Ministry of Knowledge Economy
and Korea Energy Management Corporation

AGENCY TYPE

National Government Agency

START DATE

'95 '05 2007 '15

While North American states and provinces were laying the groundwork for incremental regional climate action, South Korea began seeding a network of *national* domestic programs in Asia that started at home with the Korea Verified Emissions Reduction Program (K-VER).

Administered by Korea's Ministry of Knowledge Economy (MKE) and Korea Energy Management Corporation (KEMCO), the K-VER program kick-started early GHG reductions beginning in 2007, when lawmakers established a program for the national government to directly purchase eligible K-VER credits. The government has purchased 7.4 MtCO₂e of a total 12.1 MtCO₂e generated over the program's life – an average of 1.5 MtCO₂e/year.

By communicating its lessons learned, Korea also shaped other domestic programs in Japan and Thailand. However, Korea, and Australia, too (p. 21), are the only governments so far tracked that purchase credits to incentivize voluntary domestic reductions – *not* to meet a binding GHG target, as in the case of British Columbia.

PROGRAM ACTIVITIES

TRAINING AND CERTIFICATION

Trains and/or approves certifiers	✓
Validates projects, verifies and/or issues credits	✓

PROJECTS and MECHANISMS

Develops projects	
Establishes eligible project criteria	✓
Provides technical assistance for projects	
Operates a program-specific registry	✓
Develops project methodologies	
Approves independent VCM mechanisms for use	✓

BUYERS

Educates buyers about carbon offsetting	
Tracks participants' GHG reductions, including offset purchases	✓
Provides recognition for buyers of program-approved carbon credits	✓

MARKET MECHANISMS

APPROVED STANDARDS OR PROTOCOLS

The Korean government has approved **CDM methodologies** and other methodologies brought forth by participants for use in generating **K-VERs**. Methodologies must be based on ISO series 14064 and 14065.

APPROVED REGISTRIES

Internal, program-administered registry

APPROVED CERTIFICATION PROGRAMS/ CERTIFIERS

Program-approved verifiers only – so far there seven, including SGS and DNV Korea, and Korea Standard Assoc.

LEGAL CONTEXT

PROGRAM: VOLUNTARY OR REGULATORY?	VOLUNTARY	
OVERLAP WITH EXISTING GOVERNMENT GHG TARGETS	YES	NO



OVERSIGHT AND ADMINISTRATION

KEMCO and the MKE operate the K-VER GHG Reduction Registry. KEMCO certifies and registers KCER credits through its administration of the Korea GHG Reduction Registry Office.

ENABLING DOCUMENTS

The KCER program operates according to the MKE's "Regulations on Registration and Management of GHG Emissions Reduction Projects," "Designation and Management of the Validation and Verification Entities for GHG Reductions" and "Governmental Purchase and Transaction Guidelines for GHG Reduction Credits." Legal provisions originated in Korea's 2003 "Rational Energy Utilization Act and Implementing Ordinance."

ACCEPTED PROJECT TYPES

	<ul style="list-style-type: none"> • Wind • Hydropower • Energy efficiency
OTHER	<ul style="list-style-type: none"> • Fuel switching
	ADDITIONALITY: Project-based method

DOMESTIC DEMAND

BUYER SECTORS (CURRENT)



VOLUME TRANSACTED: 2011

439,837 tCO₂e

NUMBER OF BUYERS (PARTICIPANTS): 2011

1

As a result of Korea's national government purchasing program, the government is the program's primary buyer. Purchase volumes dropped in 2011 due to pending GHG regulations for large emitters that once generated K-VERs – leaving credit supply up to small to medium enterprises (SMEs).

FUNDING AND FEES

PRICE PER CREDIT/ CERTIFICATE <i>as of January 2012</i>	\$5.00 <i>per tCO₂e in USD</i>
WHO SETS THE PRICE?	MARKET
PROGRAM FEES	PDD and methodology development cost: approx. \$3,000-5,000/project. Verification for SME participants: \$3,000/year
OTHER PROGRAM FUNDING SOURCES	The government supports project development costs and is the projects' primary offtaker

RESOURCES AND LINKS

KEMCO K-VER WEBSITE (ENGLISH): http://kcer.kemco.or.kr/INTRO_eng/info_main.htm

ALL REGULATORY DOCUMENTS RELATED TO K-VER (ENGLISH): http://kcer.kemco.or.kr/INTRO_eng/info_sub002.htm

SUPPLY + PROJECTIONS

CURRENT SUPPLY: 2012 / EXPECTED SALES '12-'15



EXISTING PROJECTS	717 <small>*project certified as of Jan. 1, 2011</small>
PROJECT PIPELINE THROUGH 2017	UNKNOWN
NUMBER OF PARTICIPATING/ ELIGIBLE OFFSET SUPPLIERS	UNKNOWN

OUTLOOK

South Korea is contemplating GHG regulations that would introduce a domestic ETS. Yeonsang Lee, who oversees KEMCO's role in the K-VER program, reports that the government will most likely cease its purchasing program if an ETS is implemented. "At that time, credits certified from KVER projects *could* be traded in the ETS, and companies could get financial incentives through trading credits," – as opposed to government incentives. Lee cautions, though, that K-VER compliance eligibility will not be confirmed until or unless the current regulation survives parliamentary rulemaking. South Korea has also expressed early interest in establishing a bilateral offset mechanism akin to Japan's, to bring international forest carbon credits into its domestic ETS.

In the mean time, SMEs can still generate K-VERs, and KEMCO and the MKE continue to communicate the program to neighboring countries – out of a desire to establish a "common protocol" and "firm cooperative relationship" with countries like Thailand and Japan.

JAPAN

Verified Emissions Reduction Program (J-VER) and Carbon Neutral Certification Scheme

ADMINISTERED BY

Ministry of the Environment, Japan

AGENCY TYPE

National Government Agency

START DATE

'95 '05 2008 '15

Japan's Ministry of the Environment (MOEJ) launched the J-VER voluntary offsetting program one year after Korea, as an effort "by and for Japan." Indeed, J-VER's Japan-facing methodologies, internal registry and complementary Carbon Neutral Certification Scheme together comprise a purely domestic scheme.

From a supply perspective, Japan has caught on – initiating 180 small-scale projects. A Prefectural J-VER Scheme has approved two prefectures to issue and sell credits. Over 80 percent of all projects involve local forest management.

Demand, though, is stifled by J-VER credits' record-breaking price – due to Japan's high abatement costs and certification expenses. Program Administrators say the price spread (sometimes \$15 buy and \$150 sell) must narrow, "as one of the ways J-VER credits will be popular in Japan." Even so, J-VER is seeing growing demand for credits that support disaster-stricken regions, where buyers are more willing to pay a high price to revitalize local forests and businesses.

PROGRAM ACTIVITIES

TRAINING AND CERTIFICATION

Trains and/or approves certifiers	
Validates projects, verifies and/or issues credits	✓

PROJECTS and MECHANISMS

Develops projects	
Establishes eligible project criteria	✓
Provides technical assistance for projects	✓
Operates a program-specific registry	✓
Develops project methodologies	✓
Approves independent VCM mechanisms for use	

BUYERS

Educates buyers about carbon offsetting	
Tracks participants' GHG reductions, including offset purchases	
Provides recognition for buyers of program-approved carbon credits	

MARKET MECHANISMS

APPROVED STANDARDS OR PROTOCOLS

The J-VER Program offers **program-specific methodologies** (J-VERs) for use. Japan's Carbon Neutral Certification Scheme permits **J-VERs** and **Kyoto units** for use.

APPROVED REGISTRIES

Internal, program-administered registry

APPROVED CERTIFICATION PROGRAMS/ CERTIFIERS

Program utilizes ISO-14065 accredited verifiers. Validation and verification can be carried out by the same agency.

LEGAL CONTEXT

PROGRAM: VOLUNTARY OR REGULATORY?	VOLUNTARY	
OVERLAP WITH EXISTING GOVERNMENT GHG TARGETS	YES *	NO

** Japan ultimately counts J-VER reductions toward its Kyoto commitment, resulting in regulatory overlap (see Definitions)*





OVERSIGHT AND ADMINISTRATION

MOEJ hosts J-VER's Executive Committee (EC) and Certification Committee (CC). The EC governs modalities and procedures, administers the registry and oversees a Technical Sub-Committee to develop the methodologies and positive lists. The CC governs project certification and credit issuance. Japan's Certification Center on Climate Change (4CJ) hosts the J-VER and Carbon Neutral Certification Schemes' Secretariats.

ENABLING DOCUMENTS

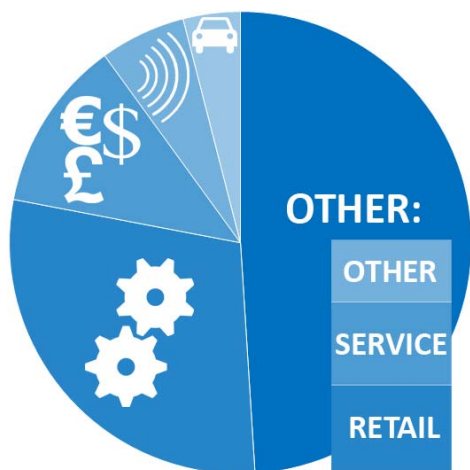
The J-VER Program was initiated by government directive based on ISO-14064 series standards.

ACCEPTED PROJECT TYPES

	<ul style="list-style-type: none"> Afforestation / Reforestation Improved forest management
	<ul style="list-style-type: none"> Biomass and solar technologies Run-of-river hydropower Energy Efficiency
	<ul style="list-style-type: none"> Livestock methane Waste water methane
OTHER	<ul style="list-style-type: none"> Fuel switching N₂O Transportation
	ADDITIONALITY: Standardized method (positive list)

DOMESTIC DEMAND

BUYER SECTORS (CURRENT)



VOLUME TRANSACTED: 2011 (4CJ estimate)

50,000 tCO₂e

NUMBER OF BUYERS (PARTICIPANTS): 2011

UNKNOWN

Under the J-VER scheme, buyers transact credits “over the counter.” Thus, J-VER does not track participants, but estimates offset buyer sectors based on over 1,100 public domestic offset purchase announcements.

SUPPLY + PROJECTIONS

CURRENT SUPPLY: 2012 / EXPECTED SALES ‘12-‘15



EXISTING PROJECTS	180
PROJECT PIPELINE THROUGH 2017	UNKNOWN
NUMBER OF PARTICIPATING/ ELIGIBLE OFFSET SUPPLIERS	UNKNOWN

FUNDING AND FEES

PRICE PER CREDIT/ CERTIFICATE <i>as of January 2012</i>	\$95-\$130 <i>per tCO₂e in USD</i>
WHO SETS THE PRICE?	MARKET
PROGRAM FEES	Fees paid directly to independent Validation and verification bodies
OTHER PROGRAM FUNDING SOURCES	NONE

OUTLOOK

The J-VER scheme was intended to issue credits from 2008 to 2012. In March 2013, the program will complete its first phase and the MOEJ will assess whether or how to continue the program. Those close to the program expect that J-VER will be extended, but believe that lowering the cost of J-VER credits will be a central topic of discussion in order to increase the program’s popularity in Japan.

In the mean time, MOEJ is focused on developing its Carbon Neutral Certification Scheme – launched in part to keep pace with corporate carbon neutrality frameworks like Australia’s National Carbon Offset Standard (page 21). Scheme members are given the option to buy international Kyoto units in place of J-VER credits – no doubt lowering the cost of participation but also potentially detracting from MOEJ’s promotion of domestic green development until J-VER prices come down.

RESOURCES AND LINKS

J-VER INFORMATION PORTAL: <http://www.4cj.org/jver/e/index.html>

J-VER MRV PROVISIONS (PRESENTATION): http://www.4cj.org/document/j-ver_eng/J-VER_MRV20111115.pdf

MOEJ CARBON NEUTRAL CERTIFICATION SCHEME WEBSITE: <http://jcs.go.jp/cn/english.html>

THAILAND

Verified Emissions Reduction Program (T-VER)

ADMINISTERED BY

Thailand GHG Management Organization

AGENCY TYPE

National Government agency

START DATE

'95

'05

2013 '15

Japan and Korea have been busy sharing lessons with their Asian neighbors – including Thailand. Since 2009, Thailand's Greenhouse Gas Management Organization (TGO) has engaged with both countries' programs and the Institute for Global Environmental Studies to design a "T-VER" scheme that reflects Asia's regional themes of D.I.Y. methodologies and a focus on domestic sustainable development.

Thailand's progress was spotlighted in January 2012 when the VCS and TGO announced that Thailand-based VCS projects can now be "tagged" in the VCS registry system with Thailand's Crown Standard – certifying that the projects confer additional domestic social co-benefits.

The TGO has set a 2013 tentative start date for the T-VER program. Though T-VER is an adaptation of regional programs like J-VER and K-VER, one difference may include Thailand's recognition of domestic credits using international standards, like Crown Standard VCS projects.

PROGRAM ACTIVITIES

TRAINING AND CERTIFICATION

Trains and/or approves certifiers	✓
Validates projects, verifies and/or issues credits	

PROJECTS and MECHANISMS

Develops projects	
Establishes eligible project criteria	✓
Provides technical assistance for projects	
Operates a program-specific registry	✓
Develops project methodologies	✓
Approves independent VCM mechanisms for use	

BUYERS

Educates buyers about carbon offsetting	✓
Tracks participants' GHG reductions, including offset purchases	
Provides recognition for buyers of program-approved carbon credits	

MARKET MECHANISMS

APPROVED STANDARDS OR PROTOCOLS

TGO is developing **program-specific methodologies** for the T-VER program. Thailand-based **VCS** credits can now also be tagged with TGO's CDM-based **Crown Standard**.

APPROVED REGISTRIES

Internal, program-administered registry in design phase; T-VER participants *may* also be able to use Thailand's national registry and NAMA registry.

APPROVED CERTIFICATION PROGRAMS/ CERTIFIERS

T-VER may use TGO-, UNFCCC- and ISO-accredited certifiers

LEGAL CONTEXT

PROGRAM: VOLUNTARY OR REGULATORY?	VOLUNTARY	
OVERLAP WITH EXISTING GOVERNMENT GHG TARGETS	YES	NO





OVERSIGHT AND ADMINISTRATION

The TGO – founded by the Ministry of Natural Resources and the Environment in 2007 – is Thailand's Designated National Authority under the CDM. TGO is the Ministry's implementing agency for domestic mitigation actions.

ENABLING DOCUMENTS

The exploration of a T-VER Program was initiated by government directive.

ACCEPTED PROJECT TYPES

	<ul style="list-style-type: none"> Afforestation / Reforestation Improved forest management Agro-forestry Urban forestry
	<ul style="list-style-type: none"> Biomass Energy efficiency
	<ul style="list-style-type: none"> Landfill methane Livestock methane Waste water methane
OTHER	<ul style="list-style-type: none"> Fuel switching Transportation
	ADDITIONALITY: Project-based method

DOMESTIC DEMAND

BUYER SECTORS



VOLUME TRANSACTED: 2011

DESIGN PHASE

NUMBER OF BUYERS (PARTICIPANTS): 2011

DESIGN PHASE

While the T-VER program has not yet been launched, TGO representatives expect that participants will likely be driven by CSR motives and hail from the government and private sectors, as well as GHG brokers and traders.

SUPPLY + PROJECTIONS

CURRENT SUPPLY: 2012 / EXPECTED SALES '12-'15



EXISTING
PROJECTS

DESIGN PHASE

PROJECT PIPELINE
THROUGH 2017

DESIGN PHASE

NUMBER OF
PARTICIPATING/
ELIGIBLE OFFSET
SUPPLIERS

DESIGN PHASE

FUNDING AND FEES

PRICE PER CREDIT/ CERTIFICATE <i>as of January 2012</i>	UNKNOWN
WHO SETS THE PRICE?	MARKET
PROGRAM FEES	DESIGN PHASE
OTHER PROGRAM FUNDING SOURCES	Regarding non-market-based program incentives, TGO reports that revenues from the sale of T-VERs will likely be tax-exempt

OUTLOOK

The T-VER Scheme is still in its design phase and, as such, TGO has not yet solidified what mechanisms will be acceptable for program use. But even in the program's early stage, it's clear that Thailand will follow Japan's example of designing a program-specific registry and set of domestic methodologies.

Thailand exhibits strong domestic uptake of GHG programs, like TGO's Carbon Footprint Label that has so far certified 233 products and 68 companies nationwide. Drivers range from domestic CSR to the pressure to green supply chains – particularly coming from Japanese companies.

But domestic demand for emissions reductions may not go as far in Thailand, with a Gross Domestic Product that equals 6 percent that of Japan. Therefore, TGO remains open to the idea of admitting international buyers into the scheme at a later date.

RESOURCES AND LINKS

VISIT THE TGO WEBSITE (ENGLISH): http://www.tgo.or.th/english/index.php?option=com_content&view=frontpage&Itemid=29

READ ABOUT THE CROWN STANDARD + VCS TAG: http://www.tgo.or.th/english/index.php?option=com_content&view=article&id=189:crown-standard-with-vcs&catid=1:actovoties-news-seminars&Itemid=58

CHINA

China Green Carbon Foundation

ADMINISTERED BY

China Green Carbon Foundation

AGENCY TYPE

National Foundation

START DATE

'95 '05 2007 '15

Launched in the same year as the K-VER program, the China Green Carbon Foundation (CGCF) also bears the telltale stamp of Asia-based voluntary programs – including internally-developed methodologies, program-based registry and use of state-approved verifiers.

The CGCF is one of the few programs tracked in this report that attract purely voluntary demand without any additional pre-compliance or other government incentive. The program transacted its first forest carbon credits to 10 domestic companies as soon as its first credits were available in late 2011 – a feat that CGCF Secretary General and State Forestry Administration (SFA) Afforestation Department Deputy Director Dr. Li Nuyun chalks up to social trends. “Individuals and companies in China increasingly want to support the low-carbon economy and sustainable development that comes with planting trees. The ‘low carbon’ trend is everywhere.” The credits were transacted on the SFA-approved China Forestry Exchange.

PROGRAM ACTIVITIES

TRAINING AND CERTIFICATION

Trains and/or approves certifiers	✓
Validates projects, verifies and/or issues credits	✓

PROJECTS and MECHANISMS

Develops projects	
Establishes eligible project criteria	✓
Provides technical assistance for projects	✓
Operates a program-specific registry	✓
Develops project methodologies	✓
Approves independent VCM mechanisms for use	

BUYERS

Educates buyers about carbon offsetting	✓
Tracks participants' GHG reductions, including offset purchases	
Provides recognition for buyers of program-approved carbon credits	✓

MARKET MECHANISMS

APPROVED STANDARDS OR PROTOCOLS

Chinese forest carbon sequestration experts contributed to the development of the **program-specific methodologies** that make up the foundation's China Forest Carbon Sink Standard.

APPROVED REGISTRIES

Internal, program-administered registry

APPROVED CERTIFICATION PROGRAMS/ CERTIFIERS

Program utilizes state-trained and approved verifiers only

LEGAL CONTEXT

PROGRAM: VOLUNTARY OR REGULATORY?

VOLUNTARY

OVERLAP WITH EXISTING GOVERNMENT GHG TARGETS

YES

NO

OVERSIGHT AND ADMINISTRATION

The China Green Carbon Foundation – previously known as the China Green Carbon Fund – was approved by the State Council, registered at the Ministry of Civil Affairs and operated under the governance of China's State Forestry Administration beginning in 2007.

ENABLING DOCUMENTS

The China Green Carbon Fund / Foundation was established by a directive of the State Forestry Administration.

ACCEPTED PROJECT TYPES



- Afforestation / reforestation
- Improved forest management



ADDITIONALITY:
Project-based method

DOMESTIC DEMAND

BUYER SECTORS (CURRENT)



VOLUME TRANSACTED: 2011

148,000 tCO₂e

NUMBER OF BUYERS (PARTICIPANTS): 2011

11

The CGCF has been pursuing methodology development and forest carbon credit certification since 2007. In 2011, it certified its first credits for sale, which were immediately transacted by 10 domestic companies.

FUNDING AND FEES

PRICE PER CREDIT/ CERTIFICATE <i>as of January 2012</i>	\$3-5 <i>per tCO₂e in USD</i>
WHO SETS THE PRICE?	MARKET
PROGRAM FEES	Project validation, verification and other fees not reported
OTHER PROGRAM FUNDING SOURCES	Non-market-based individual and enterprise endowments

RESOURCES AND LINKS

VISIT THE CHINA GREEN CARBON FOUNDATION WEBSITE (ENGLISH): <http://www.thjj.org/en/>

READ ABOUT THE PROGRAM'S FIRST TRANSACTION OF FOREST CARBON CREDITS: <http://www.tropical-forestry.org/2011/11/china%E2%80%99s-pilot-transaction-on-forestry-carbon-sequestration-officially-kicked-off/>

READ DR. LI NUYUN'S COMMENTARY ON CHINESE FOREST CARBON SEQUESTRATION: www.forestcarbonportal.com/sites/default/files/Li,%20Nuyun%202010%20-%20Developing%20Carbon%20Sequestration%20Forestry%20for%20Mitigating%20Climate%20Change.pdf

SUPPLY + PROJECTIONS

CURRENT SUPPLY: 2012 / EXPECTED SALES '12-'15



EXISTING PROJECTS	20
PROJECT PIPELINE THROUGH 2017	50-60
NUMBER OF PARTICIPATING/ ELIGIBLE OFFSET SUPPLIERS	2

OUTLOOK

The CGCF expects to transact sizeable volumes of credits from 2012-2015. And perhaps they should – not only domestic market mechanisms but also market activity seemed to be picking up in China in 2011, when China's Panda Standard also transacted 16,800 tCO₂e to domestic buyer Franshion Properties. In 2011, Ecosystem Marketplace tracked a growing volume of credits being transacted by Asia-based buyers (5% of global market share in 2010), including small volumes (total of 115,000 tCO₂e) transacted on Chinese pilot exchanges in Beijing, Tianjin and Shanghai.

While we have tracked a variety of efforts to neutralize individual, event-based and SME emissions, Chinese market participants nonetheless insist that larger volumes will not be transacted "voluntarily" until the Government describes its carbon market intentions in greater detail.

AUSTRALIA

National Carbon Offset Standard Carbon Neutral Program

ADMINISTERED BY
Low Carbon Australia

AGENCY TYPE

Government-Owned Not-for-Profit

START DATE

'95 '05 2010 '15

In recent years, it hasn't been easy being green in Australia – where Australia's ratification of the Kyoto Protocol and pending GHG regulations ruled out domestic projects under the government's popular Greenhouse Friendly program. Offset suppliers seeking to meet buyers' strong demand for supporting "backyard" projects were left in a lurch.

Enter the National Carbon Offset Standard (NCOS) Carbon Neutral Program – in part, the government's solution to consumers' double-counting confusion. Eventually, Australia would introduce the Carbon Farming Initiative (CFI) to supply real domestic credits to voluntary and compliance buyers. In the mean time, the NCOS set out guidelines for what offsets are acceptable for meeting corporate carbon neutral targets.

To run the program, the government founded Low Carbon Australia, where administrators say their government tie "gives industry an enhanced level of trust that the program is administered and regulated appropriately."

PROGRAM ACTIVITIES

TRAINING AND CERTIFICATION

Trains and/or approves certifiers

Validates projects, verifies and/or issues credits

PROJECTS and MECHANISMS

Develops projects

Establishes eligible project criteria

Provides technical assistance for projects

Operates a program-specific registry

Develops project methodologies

Approves independent VCM mechanisms for use

BUYERS

Educates buyers about carbon offsetting

Tracks participants' GHG reductions, including offset purchases

Provides recognition for buyers of program-approved carbon credits

MARKET MECHANISMS

APPROVED STANDARDS OR PROTOCOLS

NCOS recognizes for use against carbon neutral claims: **VCS** and **Gold Standard** credits, **Australian Emissions Units, CERs** (not ICERs or tCERs), **ERUs, RMUs** and **domestic offsets** that are not included in Australia's national Kyoto accounts and meet program criteria.

APPROVED REGISTRIES

No restriction

APPROVED CERTIFICATION PROGRAMS/ CERTIFIERS

No restriction

LEGAL CONTEXT

PROGRAM: VOLUNTARY OR REGULATORY?

VOLUNTARY

OVERLAP WITH EXISTING GOVERNMENT GHG TARGETS

YES

NO

OVERSIGHT AND ADMINISTRATION

The not-for-profit Low Carbon Australia was established in January 2010, with over \$100 million in funding. The company reports to the Minister for Climate Change and Energy Efficiency, which appoints its directors. The Carbon Neutral Program certifies products or business operations as carbon neutral under the NCOS.

ENABLING DOCUMENTS

The NCOS was initiated by government directive, based on ISO series 14064, 14040, the GHG Protocol and Australia's National Greenhouse and Energy Reporting Act 2007 (NGER Act) and supporting documentation.

ACCEPTED PROJECT TYPES

OTHER

No specific project types or technologies are required, beyond meeting independent standard criteria. However, credits issued from projects that reduce emissions from deforestation and degradation (REDD) and other agriculture, forestry and land use (AFOLU) must apply NCOS-approved methodologies.

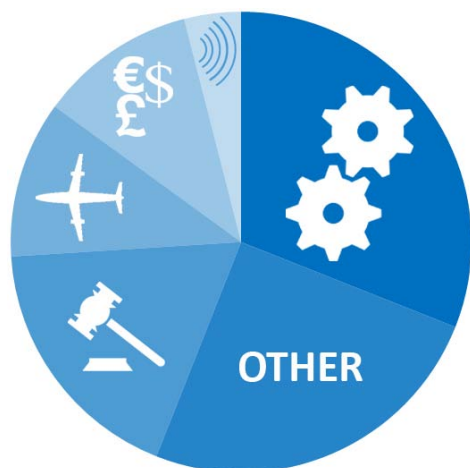


ADDITIONALITY:

Any – according to standard utilized

DOMESTIC DEMAND

BUYER SECTORS (CURRENT)



VOLUME TRANSACTED: 2011 (NCOS estimate)

937,000 tCO₂e

NUMBER OF BUYERS (PARTICIPANTS): 2011

28

2010-2011 was the program's first full year of operations. The figure above is based on participants' annual reported offset use. "Other" participating sectors include property developers and education providers.

FUNDING AND FEES

PRICE PER CREDIT/ CERTIFICATE <i>as of January 2012</i>	UNKNOWN
WHO SETS THE PRICE?	MARKET
PROGRAM FEES	According to organization or product emissions. Organization certification: AUD\$2,833 (<2,000 tCO ₂ e) to AUD\$20,085 (>10,000 tCO ₂ e). Similar fee structure for product certification.
OTHER PROGRAM FUNDING SOURCES	NONE

RESOURCES AND LINKS

VISIT THE CARBON NEUTRAL PROGRAM WEBSITE: <http://www.lowcarbonaustralia.com.au/cnprogram>

ABOUT THE NCOS: <http://www.climatechange.gov.au/government/initiatives/national-carbon-offset-standard.aspx>

POTENTIAL NCOS REVISIONS: <http://www.climatechange.gov.au/government/submissions/closed-consultations/discussion-paper-ncos.aspx>

SUPPLY + PROJECTIONS

CURRENT SUPPLY: 2012 / EXPECTED SALES '12-'15



EXISTING PROJECTS	NOT APPLICABLE
PROJECT PIPELINE THROUGH 2017	NOT APPLICABLE
NUMBER OF PARTICIPATING/ ELIGIBLE OFFSET SUPPLIERS	NOT APPLICABLE

OUTLOOK

In late 2011, the government released for public comment some draft revisions to the NCOS. Those revisions include the cancellation of Kyoto units in proportion to the sale of Greenhouse Friendly credits generated during the Kyoto Commitment period. This avoids double counting reductions.

Further, credits generated from land-based activities in developed countries under the VCS would not be required to undergo additional approval under the revised NCOS. The revision also acknowledges Australian Carbon Credit Units (ACCUs) generated under the CFI in place of "Australian Emissions Units."

Program respondents see promise in the CFI mechanism. "More domestic offsets are expected to be used in the future as the government approves new methodologies under the CFI and pending the update of the NCOS."



Costa Rica’s carbon neutrality target isn’t neutral on the voluntary carbon market. Its new “C-Neutral” Standard for achieving domestic carbon neutrality was the first measure launched in a long line of mitigation actions necessary to meet its 2021 deadline. The Standard, which recognizes VCS, Gold Standard, and CDM credits for offsetting purposes, speaks to the country’s comfort with carbon markets – and, they explain, the influence of the Australian program.

Costa Rica’s Private Forestry Program was one of the world’s first efforts to target national deforestation rates through a credited mechanism. Now the C-Neutral Standard aims to inch Costa Rica closer to carbon neutrality – despite growing transport emissions and a limited national climate budget that make private sector engagement a must.

Through 2021, the Standard targets purely domestic users. The Ministry acknowledges VCS and Gold Standard credits, however, to lend international credibility and market flexibility to the program and its offset suppliers.

PROGRAM ACTIVITIES

TRAINING AND CERTIFICATION	
Trains and/or approves certifiers	
Validates projects, verifies and/or <u>issues credits</u>	✓
PROJECTS and MECHANISMS	
Develops projects	
Establishes eligible project criteria	✓
Provides technical assistance for projects	
Operates a program-specific registry	✓
Develops project methodologies	✓
Approves independent VCM mechanisms for use	✓
BUYERS	
Educates buyers about carbon offsetting	
Tracks participants’ GHG reductions, including offset purchases	
Provides recognition for buyers of program-approved carbon credits	✓

MARKET MECHANISMS

APPROVED STANDARDS OR PROTOCOLS

The C-Neutral Standard recognizes for use **CDM**, **VCS** and **Gold Standard** credits from domestic projects, as well as **program-specific methodologies** that will generate **Costa Rican Carbon Units** (UCCs), available by Q3 2012.

APPROVED REGISTRIES

Internal, program-administered registry, or external registry as appropriate for the credits transacted

APPROVED CERTIFICATION PROGRAMS/ CERTIFIERS

Must be third-party certified by Costa Rican Accreditation Entity. Project and methodology certifiers must differ.

LEGAL CONTEXT

PROGRAM: VOLUNTARY OR REGULATORY?	VOLUNTARY	
OVERLAP WITH EXISTING GOVERNMENT GHG TARGETS	YES	NO

OVERSIGHT AND ADMINISTRATION





The C-Neutral Program is administered by the Ministry of Environment’s Climate Change Directorate.

ENABLING DOCUMENTS

The C-Neutral Standard originated with the 2007 National Climate Change Strategy, which established the 2021 carbon neutral goal, Climate Change Directorate – and resulting C-Neutral Standard.

ACCEPTED PROJECT TYPES

Not yet formalized, but considering the following:

	<ul style="list-style-type: none"> Afforestation / Reforestation REDD
	<ul style="list-style-type: none"> Biomass Hydropower Wind Solar Energy Efficiency
	<ul style="list-style-type: none"> Landfill methane Waste water methane
OTHER	<ul style="list-style-type: none"> Fuel switching N₂O Transportation
	ADDITIONALITY: Project-by-project method

DOMESTIC DEMAND

BUYER SECTORS (POTENTIAL)



VOLUME TRANSACTED: 2011

DESIGN PHASE

NUMBER OF BUYERS (PARTICIPANTS): 2011

DESIGN PHASE

The above sectors are participating or will take part in the national C-Neutral program. Because the program is in its early stages, no information is yet available about transaction volumes, prices or market projections.

SUPPLY + PROJECTIONS

CURRENT SUPPLY: 2012 / EXPECTED SALES '12-'15



EXISTING PROJECTS	DESIGN PHASE
PROJECT PIPELINE THROUGH 2017	DESIGN PHASE
NUMBER OF PARTICIPATING/ ELIGIBLE OFFSET SUPPLIERS	DESIGN PHASE

FUNDING AND FEES

PRICE PER CREDIT/ CERTIFICATE <i>as of January 2012</i>	UNKNOWN
WHO SETS THE PRICE?	MARKET
PROGRAM FEES	DESIGN PHASE
OTHER PROGRAM FUNDING SOURCES	NONE

OUTLOOK

The C-Neutral Standard and a domestic carbon standard (which will generate Costa Rican Carbon Units or UCCs) are the country's first steps toward a national carbon market.

It remains to be seen whether a national market will be voluntary or regulated – or a hybrid of two, whereby sectors voluntarily agree to binding GHG reduction targets. Regardless of the extent to which reductions are mandated, Costa Rica's pending national methodologies (due to be published sometime in the third quarter of 2012) will likely be the primary unit of trade.

The country's long-running Payments for Environmental Services Program – funded by a combination of fuel tax revenues and market-based payments – will continue to operate independently of the C-Neutral Standard and national carbon market.

RESOURCES AND LINKS

UNEP COSTA RICA CARBON NEUTRAL NETWORK PROFILE: <http://www.unep.org/climateneutral/Default.aspx?tabid=235>

SUMMARY OF NATIONAL CLIMATE CHANGE STRATEGY (ENGLISH): http://www.unep.org/CLIMATENEUTRAL/Portals/0/Country/RelatedDocuments/Summary_NCCS_Costa_Rica_Feb_08_7JoER.pdf

UNITED KINGDOM

UK Woodland Carbon Code

ADMINISTERED BY
The Forestry Commission

AGENCY TYPE

National Government Agency

START DATE

'95 '05 2011 '15

Tree planting programs have been a staple of conservation philanthropy for decades. European programs are the latest to tap into the carbon market's suite of forest management tools – even if, from a CO₂ standpoint, they are ultimately helping governments achieve climate targets that they're committed to meet with or without voluntary support.

The Forestry Commission observed that the lack of domestic voluntary mechanisms disincentivized local action on forestry and so developed the Woodland Carbon Code (WCC) to credit domestic forestry projects. Though WCC projects can't generate offsets due to the double-monetization issue (see Definitions), the Forestry Commission's Pat Snowden says the WCC shares many features with international standards – like a buffer pool, project grouping mechanism and independent certification.

"We've made sure it's rigorous," he says, "but not so rigid that it discourages woodland creation in the first place. That's the problem we had before."

PROGRAM ACTIVITIES

TRAINING AND CERTIFICATION

Trains and/or approves certifiers	✓
Validates projects, verifies and/or issues credits	✓

PROJECTS and MECHANISMS

Develops projects	
Establishes eligible project criteria	✓
Provides technical assistance for projects	✓
Operates a program-specific registry	✓
Develops project methodologies	✓
Approves independent VCM mechanisms for use	

BUYERS

Educates buyers about carbon offsetting	✓
Tracks participants' GHG reductions, including offset purchases	
Provides recognition for buyers of program-approved carbon credits	✓

MARKET MECHANISMS

APPROVED STANDARDS OR PROTOCOLS

UK forest projects can utilize the **Woodland Carbon Code**, developed by The Forestry Commission to incentivize woodland creation. Projects must also comply with the UK Forestry Standard's environmental and other criteria.

APPROVED REGISTRIES

Internal, program-administered registry

APPROVED CERTIFICATION PROGRAMS/ CERTIFIERS

Certifiers must be accredited under the UK Accreditation Service

LEGAL CONTEXT

PROGRAM: VOLUNTARY OR REGULATORY?

VOLUNTARY

OVERLAP WITH EXISTING GOVERNMENT GHG TARGETS

YES

NO

OVERSIGHT AND ADMINISTRATION

The Woodland Carbon Code was developed by the Forestry Commission, which managed the WCC's development in tandem with forestry and other experts, and helped fund the WCC's set-up. The Forestry Commission will continue to oversee management of the Code, including subsequent updates.

ENABLING DOCUMENTS

Development of the Woodland Carbon Code was initiated by a directive from the Forestry Commission.

ACCEPTED PROJECT TYPES



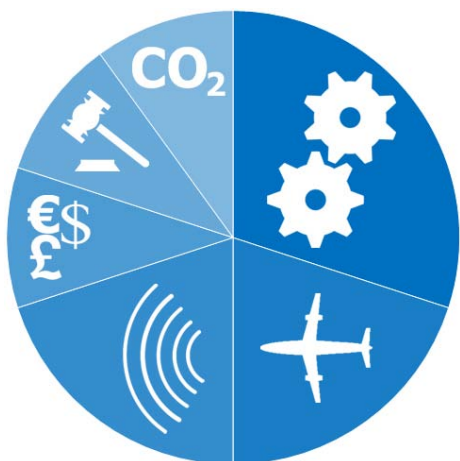
- Afforestation / Reforestation



ADDITIONALITY:
Project-based method

DOMESTIC DEMAND

BUYER SECTORS (CURRENT)



VOLUME TRANSACTED: 2011

200,000 tCO₂e

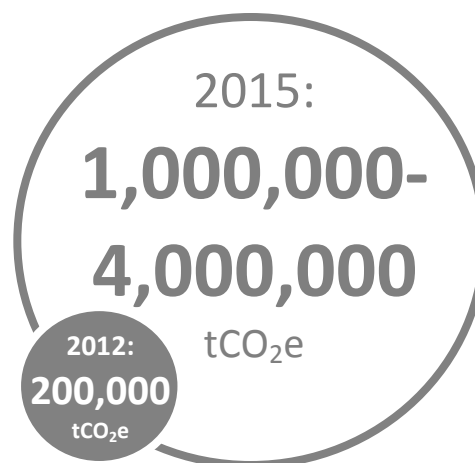
NUMBER OF BUYERS (PARTICIPANTS): 2011

4

These estimates are sourced from both WCC project developers and the Forestry Commission. As the WCC is not a trading program, the Forestry Commission does not actively track buyers.

SUPPLY + PROJECTIONS

CURRENT SUPPLY: 2012 / EXPECTED SALES '12-'15



EXISTING PROJECTS	7 / 45 Validated / Registered
PROJECT PIPELINE THROUGH 2017	150+
NUMBER OF PARTICIPATING/ ELIGIBLE OFFSET SUPPLIERS	5

FUNDING AND FEES

PRICE PER CREDIT/ CERTIFICATE <i>as of January 2012</i>	\$7 - \$24 <i>per tCO₂e in USD</i>
WHO SETS THE PRICE?	MARKET
PROGRAM FEES	Validation and verification costs: unknown, varies. Verification occurs in 5-year intervals.
OTHER PROGRAM FUNDING SOURCES	Administration of the WCC is meant to be self-financing, though the Forestry Commission will continue to fund monitoring and research in the short to medium term.

OUTLOOK

Despite not being applicable to organizations' carbon neutral targets, the WCC has made strides in the voluntary carbon market. In 2011, the UK Department for Environment, Food, and Rural Affairs updated its emissions reporting guidance to allow organizations to "net out" WCC credits from their total gross emissions – a significant recognition of market-based private sector climate action on the part of a national agency.

But while the UK's acknowledgement of the program in its current form helps drive investment, one stakeholder says the issue of double counting "remains a significant barrier to investment." The Forestry Commission is reportedly also in discussions with Markit Environmental Registry about listing a "Woodland Carbon Unit" on the independent carbon unit registry system – to improve upon the current internal project registry.

The Forestry Commission's Pat Snowdon reports that the WCC will soon see the UK Accreditation Service's approval of its first two certification bodies.

RESOURCES AND LINKS

VISIT THE WOODLAND CARBON CODE WEBSITE: <http://www.forestry.gov.uk/carboncode>

DEFRA GUIDANCE FOR GHG REPORTING: <http://www.defra.gov.uk/environment/economy/business-efficiency/reporting/>



Just because EU countries co-exist with the world’s most broad-based ETS doesn’t mean their comfort with market mechanisms blossomed overnight. Italy in particular wrestles with the task of incentivizing domestic market engagement, integrity and access.

CARBOMARK is one Italian policy response among several “Observatories” implemented to monitor and support domestic carbon market activities. The VER trading program spans two regions and focuses on forests, long lived wood products, urban forestry and biochar. To kick start the market and build capacity in the forest sector, CARBOMARK is *itself* developing landowners’ carbon offset management plans and projects.

On the demand side, CARBOMARK develops companies’ carbon management plans to target and track participants’ onsite emissions. CARBOMARK aims to educate Italian sellers and buyers, who sourced 33 percent of their credits from domestic projects in 2002-2009².

PROGRAM ACTIVITIES

TRAINING AND CERTIFICATION

Trains and/or approves certifiers	<input type="checkbox"/>
Validates projects, verifies and/or issues credits	<input checked="" type="checkbox"/>

PROJECTS and MECHANISMS

Develops projects	<input checked="" type="checkbox"/>
Establishes eligible project criteria	<input checked="" type="checkbox"/>
Provides technical assistance for projects	<input checked="" type="checkbox"/>
Operates a program-specific registry	<input checked="" type="checkbox"/>
Develops project methodologies	<input checked="" type="checkbox"/>
Approves independent VCM mechanisms for use	<input type="checkbox"/>

BUYERS

Educates buyers about carbon offsetting	<input type="checkbox"/>
Tracks participants’ GHG reductions, including offset purchases	<input checked="" type="checkbox"/>
Provides recognition for buyers of program-approved carbon credits	<input type="checkbox"/>

MARKET MECHANISMS

APPROVED STANDARDS OR PROTOCOLS

The CARBOMARK Program develops and offers only **program-specific methodologies** for use.

APPROVED REGISTRIES

Internal, program-administered registry

APPROVED CERTIFICATION PROGRAMS/ CERTIFIERS

CARBOMARK utilizes program-based certifiers only

LEGAL CONTEXT

PROGRAM: VOLUNTARY OR REGULATORY?

VOLUNTARY

POTENTIAL OVERLAP WITH EXISTING GOVERNMENT GHG TARGETS

YES

NO

OVERSIGHT AND ADMINISTRATION

The CARBOMARK program is jointly administered by Veneto’s Directorate for Forests and Mountain Economy, and Friuli VG’s Central Department of Agricultural, Natural and Forest Resources and Mountains. Both departments house “Observatories,” which are local offices instituted by the regional governments to provide advice and monitor the regularity of carbon market transactions. A few other observatories operate within university faculties and regional environment agencies throughout Italy.

ENABLING DOCUMENTS

The CARBOMARK Program was initiated by the EU LIFE Programme

ACCEPTED PROJECT TYPES



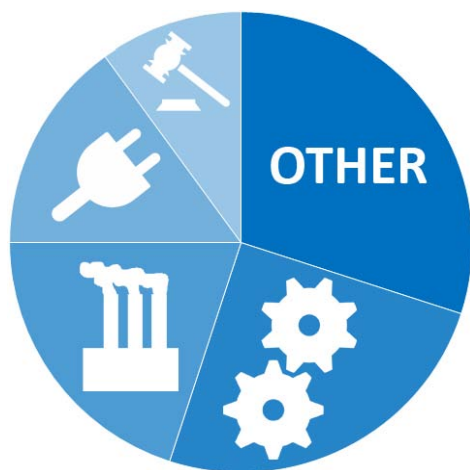
- Improved forest management
- Urban forestry
- Long-lived wood products
- Biochar



ADDITIONALITY:
Risk-related buffer tool
(Standardized method)

DOMESTIC DEMAND

BUYER SECTORS (CURRENT)



VOLUME TRANSACTED: 2011

DESIGN PHASE

NUMBER OF BUYERS (PARTICIPANTS): 2011

20

Participants can use offsets to meet up to 20 percent of the voluntary reductions targeted in their emissions management plans – the remaining 80 percent must be direct GHG reductions. CARBOMARK expects that an additional 7,000-8,000 tCO₂e will be reduced or avoided as a result of participants' direct actions through 2015.

FUNDING AND FEES

PRICE PER CREDIT/ CERTIFICATE <i>as of January 2012</i>	\$10 - \$55 <i>per tCO₂e in USD</i>
WHO SETS THE PRICE?	MARKET
PROGRAM FEES	In the program's pilot phase, there is no cost to the project owner to enroll their forest area
OTHER PROGRAM FUNDING SOURCES	CARBOMARK is 50 percent financed by the EU LIFE program

RESOURCES AND LINKS

CARBOMARK PROGRAM WEBSITE: <http://www.carbomark.org/>

EU LIFE PROGRAM WEBSITE: <http://ec.europa.eu/environment/life/>

²**SOURCE:** Pettenella, D., L.Brotto, L.Ciccarese, V.Giulietti, P.Mori, L.Perugini, R. Romano (2011) Gli accordi volontari per la compensazione della CO₂. Indagine conoscitiva per il settore forestale in Italia. INEA, Quaderno 2, Osservatorio Foreste-Compagnia delle Foreste, 2011, p. 237.

SUPPLY + PROJECTIONS

CURRENT SUPPLY: 2012 / EXPECTED SALES '12-'15



EXISTING PROJECTS	4
PROJECT PIPELINE THROUGH 2017	20
NUMBER OF PARTICIPATING/ ELIGIBLE OFFSET SUPPLIERS	7

OUTLOOK

As with other EU projects, Italian actors express concern that the government will ultimately take credit for voluntary CO₂e reductions in its Kyoto accounts. In light of this, CARBOMARK designers like Silvia Stefanelli consider Italy's Kyoto forest carbon inventories to be "business as usual." They then ask forest owners to set aside an additional part of their increment and not to use its entire yield, so that it is (hopefully) not accounted for at the national level.

"It is still a grey area of interpretation, yes," Stefanelli says, but reiterates, "In our forest management methodology, we deduct what's taken into account in national inventories and say, 'ok that's the baseline. We are in fact doing something additional that will be locked into long term contracts with landowners.'" However, as the Italian government has not yet *formally* acknowledged CARBOMARK reductions from forest management, for the sake of conservativeness this program is still classified as potentially overlapping with existing regulations. Other program offsets are not double-counted.

NETHERLANDS

Bosklimaatfonds

ADMINISTERED BY
Nationaal Groenfonds

AGENCY TYPE

Dutch National Fund for Rural Areas

START DATE

'95 '05 2011 '15

Rather than approach its new woodland creation program by writing a fresh set of program-specific methodologies, The Dutch National Fund for Rural Areas' Bosklimaatfonds program took a simpler route – in 2011, it adopted the CarbonFix Standard to guide its afforestation projects.

CarbonFix uniquely credits reductions that are also counted by governments in their compliance market accounts – on the condition that buyers are made aware of that fact. Why? Says CarbonFix's Pieter Van Midwoud, "Forests are not the first place countries look for mandatory CO₂ reductions – so the carbon is not additional, but the forest is." The primary aim of Bosklimaatfonds is to "incentivize a substantial increase in the area of land devoted to woodland in the Netherlands."

Project developer Bosklimaatfonds aggregates landowners under the project, and each is paid a one-time €4,000/ha. The resulting CO₂ certificates will be sold to Dutch buyers.

PROGRAM ACTIVITIES

TRAINING AND CERTIFICATION

Trains and/or approves certifiers

Validates projects, verifies and/or issues credits

PROJECTS and MECHANISMS

Develops projects

Establishes eligible project criteria

Provides technical assistance for projects

Operates a program-specific registry

Develops project methodologies

Approves independent VCM mechanisms for use

BUYERS

Educates buyers about carbon offsetting

Tracks participants' GHG reductions, including offset purchases

Provides recognition for buyers of program-approved carbon credits

MARKET MECHANISMS

APPROVED STANDARDS OR PROTOCOLS

In 2011, the Bosklimaatfonds program selected the **CarbonFix Standard** for use in developing projects that generate program certificates.

APPROVED REGISTRIES

Certificates are likely to be tracked internally

APPROVED CERTIFICATION PROGRAMS/ CERTIFIERS

Bosklimaatfonds will utilize CarbonFix auditors (UNFCCC and/or Forest Stewardship Council Forest Management scope accredited auditors)

LEGAL CONTEXT

PROGRAM: VOLUNTARY
OR REGULATORY?

VOLUNTARY

OVERLAP WITH
EXISTING
GOVERNMENT GHG
TARGETS

DESIGN
PHASE

OVERSIGHT AND ADMINISTRATION

Bosklimaatfonds is a program of the Nationaal Groenfonds (the Dutch National Fund for Rural Areas), and established and funded by two national Ministries in 2001. Bosklimaatfonds aggregates landowners' project activities and distributes to them the benefits from the sale of the afforestation certificates.

ENABLING DOCUMENTS

Bosklimaatfonds program was initiated and funded by national government directive.

ACCEPTED PROJECT TYPES



Afforestation / Reforestation

on arable land and grassland in the Netherlands that landowners want to transition to forest. Minimum individual project activity size is five hectares to constitute a forest.



ADDITIONALITY:

Project-based method

DOMESTIC DEMAND

BUYER SECTORS



VOLUME TRANSACTED: 2011
DESIGN PHASE

NUMBER OF BUYERS (PARTICIPANTS): 2011

DESIGN PHASE

Because Bosklimaatfonds requires that credits can only be sold ex-post (after the CO₂ sequestration has occurred). There were no ex-post credits available in 2011 – therefore, no transaction data to report.

FUNDING AND FEES

PRICE PER CREDIT/ CERTIFICATE <i>as of January 2012</i>	\$32 (€25) <i>per tCO₂e</i>
WHO SETS THE PRICE?	PROGRAM
PROGRAM FEES	CarbonFix Program: €1,500 plus €0.50/tCO ₂ e; plus certifier costs (estimated €20,000 for three rounds of certification)
OTHER PROGRAM FUNDING SOURCES	The Dutch Ministry of Infrastructure and Environment and Ministry of Economic Affairs and Agriculture contributed approximately €11.5 million to launch Bosklimaatfonds in 2001

SUPPLY + PROJECTIONS

CURRENT SUPPLY: 2012 / EXPECTED SALES '12-'15



EXISTING PROJECTS	1 PROJECT, 217 LANDOWNERS
PROJECT PIPELINE THROUGH 2017	1 PROJECT, 400 LANDOWNERS
NUMBER OF PARTICIPATING/ ELIGIBLE OFFSET SUPPLIERS	1 SELLER (Bosklimaatfonds)

OUTLOOK

Since Bosklimaatfonds' adoption of the CarbonFix Standard, both the fund and the standard are still ironing out program details – like how to properly communicate the projects' environmental benefits; transfer certificate ownership without use of an international registry; how to perhaps bundle the certificates with international carbon credits so Dutch buyers can claim their purchase in the pursuit of carbon neutrality.

This last issue is an important consideration for programs monetizing environmental assets in the EU – and one the Bosklimaatfonds program has yet to resolve. It may yet sell certificates on a per-tonne basis, bundled with international credits. Alternatively, they might monetize projects according to some non-CO₂ indicator. If this is the case, Groenfonds will not sell the projects as “offsets,” to avoid buyer confusion.

RESOURCES AND LINKS

VISIT THE BOSKLIMAATFONDS WEBSITE (ENGLISH): <http://www.climateprojects.info/NL-BKF/>

READ ABOUT THE NATIONAAL GROENFONDS (ENGLISH): <http://www.nationaalgroenfonds.nl/English/Paginas/default.aspx>

VISIT THE CARBONFIX WEBSITE (ENGLISH): <http://www.carbonfix.info>

CONCLUSION

Governments are increasingly turning to voluntary carbon market mechanisms – as a source of market innovation and experimentation; to pick up the slack in demand from regulated markets; and to exceed formal GHG targets. In particular, they are calling upon the voluntary carbon markets to grow beyond their traditional role as a corporate social responsibility instrument to now inform and shape a post-2020 climate regime.

How will governments account for **project-level REDD activities**? How will developing countries account for domestic reductions that could meet **domestic or donor country targets**? To what extent *can* developing countries incentivize **domestic demand**? How can the international orientation toward **project-level crediting be scaled up**? All are questions of great import to governments worldwide and are being addressed, bottom-up, by voluntary actors.

At a more traditional level, developed country governments are harnessing corporate voluntary demand for domestic CO₂ reductions to achieve and/or exceed national GHG targets, or to confer additional environmental benefits. In many cases, regulatory overlap remains a challenge that – if solved – could inform developing country efforts to both meet future domestic GHG targets and supply offsets to or fulfill bi-lateral agreements with developed countries.

Government: Exclusive Source of Market Scale

Governments are fostering domestic offset quality and *supply* by a variety of means. But the challenge facing voluntary carbon offset projects worldwide is not to create more supply, but to incentivize *demand* – and governments are exclusively best-positioned to do just that.

This report finds that the largest offset volumes transacted in 2011 – and projected into the future – come from programs that have established formal mechanisms for rewarding offset purchases.

This is the case at any point along the spectrum of Market Types (p. 2 & 3), from purely voluntary programs (see DEFRA's recognition of Woodland Carbon Code purchases, p. 25), to both voluntary and mandated government purchase programs (see British Columbia, p. 11, and Korea, p. 13) to compliance programs (see California, p. 7).

These four examples set the rules by which credits can enter their programs, they clearly incentivize demand – and the private sector has followed with supply. Together, they account for around 80% of all transactions tracked among government programs in 2011. Other programs that have taken the more traditional “if you build it, they will come” approach to voluntary demand exhibit lesser volumes.

Market Clarity in a Fragmented Ecosystem

Market experts have repeatedly warned against the potential confusion and administrative complexity of market fragmentation. But as regions set domestic GHG targets in the absence of a suitable international accord – at least until 2020 – disparate domestic actions are already upon us.

Market mechanism fungibility can bind various national and sub-national efforts ahead of a broader agreement. In some cases – particularly in the US west and Oceania – programs are already making rules with the big picture in mind, by considering project types, independent standards and other mechanisms that potential future trading partners are also likely to adopt. In Asia, the use of ISO-14060 series standards fosters market cohesion to a lesser degree.

The potential acknowledgement of VCS among governments in Thailand, Korea, Costa Rica and a few other countries could also be a tie that binds otherwise geographically detached marketplaces. Before linking through the common acceptance of any independent standard, government programs must currently recognize the whole package – like a standard-approved independent registry and project certifiers. British Columbia has already done so (Markit registry), and California and Costa Rica are in the process of assessing independent registries for program use.

One must also keep in mind that some government programs were not conceived to reach beyond their borders and their purpose is strictly related to local benefits. This aim is reflected in their choice of project types, standards and market design – which can nonetheless benefit from attention to programs with successful participant uptake.

Whatever the programs' purpose, though, one trend is evident – that governments tend toward the wholesale adoption of the best *and* less effective traits of neighboring jurisdictions' programs. Regionally-influenced marketplace design as illustrated in FIGURE 1 (p. 3 and 4) demonstrates the need for expanded international dialog among active and potential government-based programs.

To this end, the onus is on industry organizations, NGOs and governments themselves to move the conversation forward. Ecosystem Marketplace and its commissioning partners intend to continue to track these and other emerging domestic markets – especially as developing countries make the transition from offset supplier to buyer and developed countries, too, devise new institutional frameworks for financing GHG reductions.



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