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Mitigating Climate Change: Leveraging the Potential of Voluntary Standards in the Agriculture and Forestry Sectors

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THIS BRIEF TARGETS

- Policymakers in international and agricultural development, environment and international trade.
- Private-sector and civil-society stakeholders.
- Managers and stakeholders of sustainability standards.

KEY MESSAGES

- Product manufacturers are voluntarily seeking means for reducing the carbon footprint of their production.
- There are a growing number of voluntary standards providing incentives to producers to reduce carbon along the supply chain in the food and agriculture sectors.
- Three of the most popular approaches – sustainable-management standards, carbon footprint standards and voluntary carbon offset standards – operate in distinct spheres but offer complementary services.
- Significant opportunities for increased effectiveness may be available, through approaches that combine the strengths of these different voluntary standards in the form of joint strategies and systems.

PURPOSE OF ISSUE BRIEF: This brief aims to facilitate more effective use of voluntary standards in mitigating climate change in the agriculture and forestry sectors.

Voluntary Standards in the Agriculture and Forestry Sectors

The livelihoods of roughly 450 million of the world's poorest people are entirely dependent on managed ecosystem services. An estimated 2.5 billion of the world's rural poor depend directly upon agricultural commodities for their livelihoods. Approximately 13.7 million people are employed in forest product management and extraction worldwide. The annual reported value of wood and non-wood forest product removals is more than US$ 470 billion.

The importance of the agriculture and forestry sectors as springboards for economic development may be rivaled only by their potential to contribute to climate change and climate-change mitigation. Together, agriculture and forestry account for approximately 30 percent of total greenhouse-gas (GHG) emissions. The total mitigation potential from these sectors is estimated at 12 gigatonnes, with 75 percent of this potential located in the developing world. Enhancing soil and crop management and avoiding deforestation are among the most important strategies for mitigating GHG emissions from these sectors.

The international community has placed significant importance on the potential to use markets as a key instrument in promoting mitigation actions. Over the course of the past two decades, voluntary standards have shown a unique ability to provide the infrastructure necessary to allow new markets for sustainable products to develop. Advances in the development of criteria definition, traceability, monitoring and enforcement, combined with a growing need for flexibility across national jurisdictions, have given rise to a host of voluntary-standards-based systems aimed at developing markets for climate-friendly production practices. This brief provides an overview of the state of play of different standards initiatives as they relate to climate-change mitigation in the agriculture and forestry sectors, as well as the opportunities and challenges associated with using such instruments in climate-mitigation strategies.

Enhancing soil and crop management and avoiding deforestation are among the most important strategies for mitigating GHG emissions.

The agriculture and forestry sectors have adopted three distinct voluntary-standard strategies for measuring and communicating climate-change-related claims to consumers and other stakeholders:

1. Identifying and measuring adoption of best-management practices, typically in production, as reflected in a wide range of *sustainable-management standards.*

2. Identifying and measuring actual emissions generated by products or services, as reflected in the recent growth of *product carbon-footprinting standards.*

3. Identifying and measuring extraordinary emission reductions achieved in production processes, as reflected by the proliferation of *voluntary carbon-offset standards.*

These spheres of development for private voluntary standards share an overarching aim to tap into growing markets for products that can demonstrate positive sustainable-development and climate-change impacts, but use very different mechanisms for actually doing so.

Sustainable-management Standards

Sustainable-management standards (such as the Forest Stewardship Council, Program for the Endorsement of Forest Certification, UTZ Certified and Rainforest Alliance certification, plus a host of Sustainability Roundtables) represent the oldest and most mature group of standards with a direct relevance to climate-change mitigation. Such standards have experienced significant growth in market share; some have gained substantial consumer recognition. They provide robust management and reporting frameworks for ensuring the adoption of climate-mitigating activities.

Many major global multinationals have made commitments to purchasing from sustainable sources, resulting in skyrocketing growth rates for many sustainable-management standards. For example, over the last five years sales of sustainable coffees and forestry products have grown by 27 and 40 percent per annum, respectively. Such growth is pushing sustainable-management standards into mainstream territory, with global market penetration nearing ten percent across both sectors.

However, few sustainable-management standards actually specify practices for achieving emission reductions per se. Moreover, the historical focus of such initiatives on production practices, without attention to broader supply-chain practices, effectively limits their ability to stimulate emission-reducing practices along entire product lifecycles. The challenges facing sustainable-management standards explain, in part, the recent growth of a new regime of voluntary carbon-footprinting standards.

Carbon-footprint Standards

Product carbon-footprint standards are relatively new, and focus on measuring and communicating the level of GHG emissions embedded within a given product. Most product carbon-footprinting standards apply lifecycle assessment (LCA) of specific products from cradle to grave, thus distinguishing product carbon footprinting from the production-specific orientation of sustainable-management standards.

As of 2011 there were 15 to 20 formal product carbon-footprinting initiatives in action, virtually all of which were established over the last three years. Among such standards currently being developed or implemented, the following three types of standards/claims dominate the field:

Carbon-neutral claims: Claims attesting that a product has a zero

	Forest Stewardship Council	Program for the Endorsement of Forest Certification	Sustainable Forestry Initiative	Common Code for the Coffee Community	Utz Certified	Fair Trade Labelling Organizations International	International Federation of Orgranic Agriculture Movements	GLOBAL -GAP	Social Accountability International	Rainforest Alliance
Carbon Index										
Criteria for measuring GHGs	No	No	No	No	No	No	No	No	No	No
Criteria for reducing GHGs	No	No	No	No	No	No	No	No	No	No
Criteria for increasing soil sequestration	No	No	No	No	No	Recommended	No	No	No	Recomended

Table 1: Voluntary Sustainability Standards' Explicit Criteria Coverage of GHG Emission Reductions: A survey of data in the International Trade Center's T4SD Database reveals very low criteria coverage of explicit GHG Emission-reduction measures. Where such measures are mentioned, they are recommended rather than required. This does not mean that these standards do not have positive impacts on reducing GHGs, on the contrary, improved soil management practices are recognized as one of the most important mitigation opportunities in the agriculture sector. Source: Potts, J., et al. (2010)

net GHG output throughout the product's lifecycle.

Embedded-carbon statement: Claims stating the amount of GHGs released through production (and potentially the use) of the product.

Low-carbon claims: Claims attesting that a product is produced using techniques that minimize the release of GHGs into the atmosphere.

Product carbon-footprint standards are performance based, focusing on claims related to actual GHG outcomes resulting from product manufacture and use. The lifecycle approach they typically adopt provides a concrete measure of GHG emissions as they arise over the entire life of a specific product. This feature distinguishes them from sustainable-management standards, and represents one of their core assets.

However, carbon-footprinting standards face a number of methodological challenges related to measuring and calculating "performance." The most obvious methodological challenge facing the carbon-labeling sector is the absence of consistency among the different methods being applied. Even more important is whether or not the boundary conditions used in carbon labeling capture the most important sources of GHG emissions, such as land-conversion effects, which are not typically captured in LCA databases.

The complexity and costs associated with product-based lifecycle assessments represent a major constraint to large-scale roll out, while the focus on carbon outcomes limits their ability to provide substantive guidance on the actual practices needed to reduce the carbon footprints of products. With this in mind, there may be significant opportunities for enhanced collaboration among the process-based sustainable-management standards and the more performance-based carbon-footprinting approaches.

Voluntary-offset Standards

Voluntary carbon-offset standards establish criteria for measuring and accounting GHG-mitigation activities in the form of emissions reductions arising from specifically-designed "mitigation projects." Voluntary-offset standards do not necessarily bear any link to the sale of physical products, but instead offer a means of generating additional revenue for producers, on the basis of explicit emission-reduction activities.

At present there are more than 15 voluntary carbon-offset market standards in operation. However, in 2010 three standards

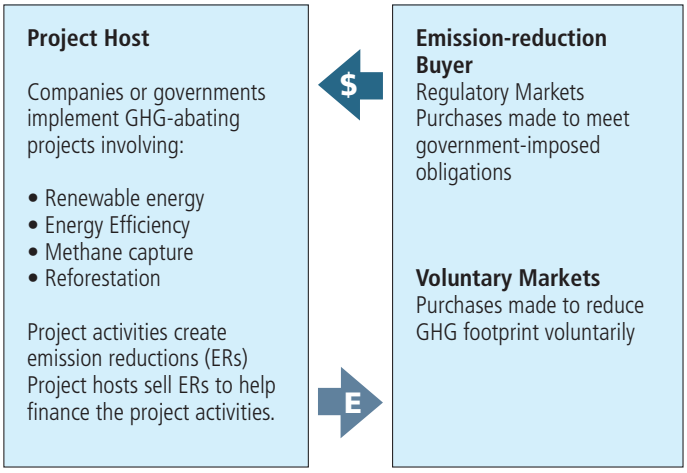

Figure 1: Voluntary-offset standards support the operation of Global Carbon Markets: Regulatory offset markets and voluntary offset markets are part of a single and intertwined global offset market. Emission-reduction credits are earned through explicit offset projects and then sold to institutions and/or governments in order to meet regulatory or voluntary emissions-reduction commitments.
Source: *Green Markets International (2007)*

– the Voluntary Carbon Standard, the Climate, Community and Biodiversity Standard, and the Climate Action Reserve Standard – accounted for 69 percent of the total voluntary-offset market. While a trend toward strong growth has been maintained over the past five years with 100 percent growth between 2007 and 2010, the market remains relatively small representing approximately 0.3 percent of the total global offset market.

The biggest challenges facing voluntary carbon-offset markets relate to the costs associated with project implementation and the limited basis for major market growth. So far, the voluntary offset-market has been driven predominantly by pre-compliance actions from producers and companies expecting the impending coming to force of regulatory regimes. Without such pressure, it is unlikely that the voluntary offset market would hold any significant hope as a force for mitigation. Moreover, it is certain that the voluntary offset market will remain a very small portion of the larger regulated carbon market. This situation has left some participants to describe the voluntary offset market as a "testing ground for procedures, methodologies and technologies," rather than a major driver for mitigation. This basic challenge or limitation of voluntary

Mitigation factor	Sustainable-management Standards	Product Carbon Footprinting	Voluntary Carbon-offset Standards
Guidance on good agricultural practices, including soil management	High	Low	High
Capacity to prevent and manage deforestation	Low	Low	High
Capacity to ensure additionality	Low	Low	High
Measurable, reportable and veri-fiable reductions	Low	High	High
Potential for mainstream market penetration in short-medium term	High	Low	Low
Developing country access and benefits	Agric.=High, Forestry=Low	Low	Low

Table 2: Overview of the expected capacity of different voluntary standards systems to address key mitigation variables based on analysis of standard system criteria, conceptual approach and current market uptake.

carbon-offset markets begs the question of whether or not there are opportunities for connecting voluntary carbon-offset markets with the established consumer markets associated with sustainable-management standards and carbon footprinting.

Cross-cutting Observations

Three major types of voluntary standards are being applied to the agriculture and forestry sectors. The different approaches represent tailor-made solutions to specific problems in managing climate change within the supply chain. A few key observations provide a basis for evaluating opportunities to leverage voluntary initiatives in the agriculture and forestry sectors as catalysts toward a low-carbon economy each bearing their own specific strengths and weaknesses (see Table 2).

- Sustainable-management standards represent the most important market opportunity at present. But the climate-change portion of sustainable-management standards represents a relatively minor and unmeasured component of these standards.

- Carbon-footprinting standards have been designed to fill some of the gaps associated with sustainable-management standards. They focus on concrete performance-based measurement of carbon emissions throughout a product's lifecycle, but have no mechanisms for measuring additionality, or providing guidance for managing emission reductions.

- Voluntary-offset standards have the most robust systems for measuring and enforcing emission reductions and additionality. They offer indirect access to revenue streams from regulated markets for carbon offsets and direct linkages to key mitigation opportunities.

- All voluntary standards are burdened by the additional costs associated with measurement and enforcement. Carbon footprinting and voluntary-offset standards, in particular, are currently limited to niche markets due to the costs and complexity associated with LCA and additionality measurement processes. Higher costs in developing countries constrain their potential as mitigation tools in those regions where mitigation potential is greatest. ■

WAY FORWARD

Voluntary standards represent an increasingly important tool for stimulating climate-friendly market growth. The inter-jurisdictional reach and flexibility of voluntary standards makes them particularly promising tools for leveraging market forces in the global context. Recent activity suggests particular potential to use voluntary instruments to promote climate-change mitigation in forestry and agriculture.

The degree to which this potential will be realized depends upon factors ranging from the direct impacts of voluntary standards on climate-change mitigation to the relationship those standards have with developing-country producers and sustainable livelihoods. Given the diverse characteristics of product carbon footprinting and sustainable-management and voluntary carbon-offset standards, mitigation gains appear possible through crossfertilization of approaches.

POLICY RECOMMENDATIONS

Policymakers should invest in further cross fertilization of existing voluntary markets and initiatives to enable more robust and manageable mitigation impacts. Specific opportunities include:

- Investing in monitoring and reporting GHG impacts of sustainable-management standards, drawing from systems applied in carbon footprinting and voluntary-offset standards;

- Providing capacity building to assist developing-country stakeholders to participate in voluntary standards markets;

- Pilot testing the role of voluntary carbon-offset markets as catalysts for adopting sustainable-management standards through hybrid transition projects; and

- Pilot testing a combined product carbon-footprinting/ sustainable-management standard.

Suggested Reading

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References and Foonotes

[i] This brief draws from research conducted for the Trade Standards Practitioner's Network which can be found in "Voluntary Standards and Climate Change: An Overview of the Role of Voluntary Standards in Climate Change Mitigation in the Agriculture and Forestry Sectors" available at: http://tradestandards.org/proxy/Document.195.aspx.

[ii] Wal-Mart, 2006; Mars, 2009; Cadbury, 2009; Kraft, 2009; Unilever, 2009.

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