

Ethical Commodities: Issues in their Production, Credibility, and Trade

(Ms No. 03401) Elsevier "Food Management, Policy and Regulations"

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Abstract

The production and trade of commodities designated as ethical or sustainable has grown exponentially in recent years. Historically, it has been the purview of governmental policies and international agreements to foster and support products and services that increase sustainability. In recent years, however, parts of that role have been substantially undertaken by markets and civil society in the form of Corporate Social Responsibility initiatives and voluntary standards or ecolabels. These efforts have grown rapidly in commodities such as palm oil, sugar, cotton, cocoa, and coffee over the past 2 decades. However, the future of these voluntary standards is unclear since, on the one hand, they depend largely on consumer trust but, on the other hand, are based on limited evidence and on systems of compliance that can be fragile.

To date, governments have largely taken a laissez faire stance, expecting that such market-based initiatives would or should be managed exclusively via market forces. As these initiatives become increasingly widespread investors and policy makers are being forced to reflect on the relative efficacy of voluntary approaches. Is there a case for leveraging such standards for development objectives like the Sustainable Development Goals or as tools to facilitate more effective policy and to improve or complement some aspects of the regulatory environment?

Answering this will depend on a robust, evidence-based understanding of the potential effectiveness and Return on Investment (ROI) of voluntary standards in comparison to competing initiatives in promoting and managing transformative change across commodity supply chains. Advances in data collection and assessment are already setting the stage for more strategic approaches and the understanding of best practices.

Keywords

Standards, commodities, compliance, credibility, CSR, data, development, impacts, market, performance, policy, public good, supply chains, sustainable, trade

Sustainability is a public good and is thus within the purview of governmental policies and international agreements. Yet, the sometimes ungainly and slow nature of such processes creates the opportunity for more responsive approaches to fill the gap. Corporations and civil society in the form of CSR and voluntary standards or ecolabels have created market-based mechanisms in an effort to overcome many of the limitations presented by public processes. Ethical trade or sustainability-oriented trade, to use a slightly broader term, are evidence of this appeal and the relatively quick surge of such standards toward prominence across a number of different sectors further confirms the importance of this approach.

To date, governments have taken a largely *laissez faire* stance recognizing the potential of sustainability standards as vehicles to support smarter policy and even to improve some aspects

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of the regulatory environment (UN Forum on Sustainability Standards, 2013). But the relevance and contribution of voluntary standards to public policy specifically, and the public good more generally, can no longer be determined by good intentions; the true value and contribution of such initiatives can only be secured through the development of a compelling, objective and comparable evidence base.

Trends

Four trends are impacting the recent exponential growth³ of ethical or sustainable production and trade.

1. *Increasing consumer awareness and policy initiatives*

Fueled by increasing consumer awareness, our global trading systems are responding to corporate and civic pressure for greater levels of ethical compliance at nearly every level (Hopkins 2012; Öberseder, Schlegelmilch and Murphy 2013).

In food and agricultural products awareness of unethical practices ranges across commodities – from concern regarding the high levels of pesticide use in cotton and the deforestation caused by palm oil plantations to persistent child labor in cocoa and economic deprivation for millions of coffee farmers (Potts *et al.*, 2014). In the last two decades, partly in response to the call for increased sustainable consumption and production under Agenda 21⁴ and to growing consumer concern, organic, fair trade, eco-friendly, ethical, and many other labels have become widely available in northern markets. Increasingly major cities in the developing world, sometimes driven by food safety concerns and changing demographics, are experiencing growth in the use of sustainability labels (Henson Humphrey, 2010).

2. *Evolution of Corporate Social Responsibility mandates*

Following these trends, Corporate Social Responsibility (CSR) initiatives have evolved to become increasingly important to consumers and shareholders alike (Crane, Matten and Spence, 2008) and they have been progressively redefined (Matten and Moon, 2008). Until recently it was more common for CSR initiatives to resemble charitable giving, separate from business operations and profit maximization. Today, firms are increasingly looking to how they can incorporate more societally responsible practices into their everyday operations and investments (Pedersen and Andersen 2006; Matten and Moon, 2008; Giovannucci, von Hagen and Wozniak, 2014). The corresponding understanding of the company as a vector for shared value and as a socially and environmentally responsible entity is not necessarily just an ethical claim; it also positions a firm to be more innovative, competitive, and successful (Porter and Kramer 2011) and represents an important expansion of CSR beyond charitable giving.

An important aspect of a new CSR perspective is a greater willingness and a greater capacity to understand the pragmatic realities of sustainability initiatives. This can be framed as a more sophisticated view of cost-benefit or the Return on Sustainability Investment. An ROSI is measured in the key environmental, social, and economic dimensions and not merely with a financial yardstick.

³ State of Sustainability Initiatives Review, 2014.

⁴ <https://sustainabledevelopment.un.org/outcomedocuments/agenda21>

3. Increasing need to manage risk through stakeholder engagement

From this new vantage, companies face the predicament of responding to a complex range of social, environmental and economic risks and an ever-expanding diversity of stakeholder interests. The risks associated with stakeholder engagement may have appeared high in the early days, but over time, the risk of failing to engage has proven to result in even higher reputational risks, with companies potentially facing media scandals, public boycotts and regulation aimed at stimulating corporate practices in accordance with social norms (Crane, Matten and Spence 2008; Hopkins 2012).

Moreover, internally developed CSR efforts have become increasingly insufficient to inspire consumer trust (Öberseder, Schlegelmilch and Murphy 2013; Giovannucci, von Hagen and Wozniak 2014), giving rise to a growing need for external platforms to facilitate the stakeholder dialogue and norm setting processes that offer greater intrinsic levels of public trust (Görg, Hanley, Hoffmann and Seric 2016).

4. Growing importance of rural communities as locus of sustainability efforts

Although the general concept of CSR aligns well with the global imperative for sustainable development, the international community has increasingly placed a focus on those most in need located in rural communities (Brundtland, 1989) — particularly those deriving their livelihoods from agriculture who comprise nearly two thirds of the world's poorest people according to the World Bank (Olinto *et al.*, 2013). Mirroring this emphasis, some of the most significant advances in CSR initiatives have focused on two dimensions: environmental conservation and ensuring sustainable livelihoods and safe working conditions for workers and smallholder farmers supplying agricultural commodity chains.

The effects of interventions cannot be adequately understood or managed if seen only from the perspective of a bilateral transaction or single supply chain. Effects must be understood from a landscape level that includes the dynamics of the social landscape (community, governance, etc.) and the economic landscape (labor, wages, etc.) as well as the environmental landscape if we are to manage for successful outcomes.

These combined trends set the stage for the rapid growth in ethical trading initiatives in commodities witnessed since the early 1990s. In the initial stages, voluntary standards and ecolabels such as Fair Trade, Organic, and The Rainforest Alliance operated as market differentiators and, as a result, were

Brief History of Milestones for Trade in Sustainable Commodities

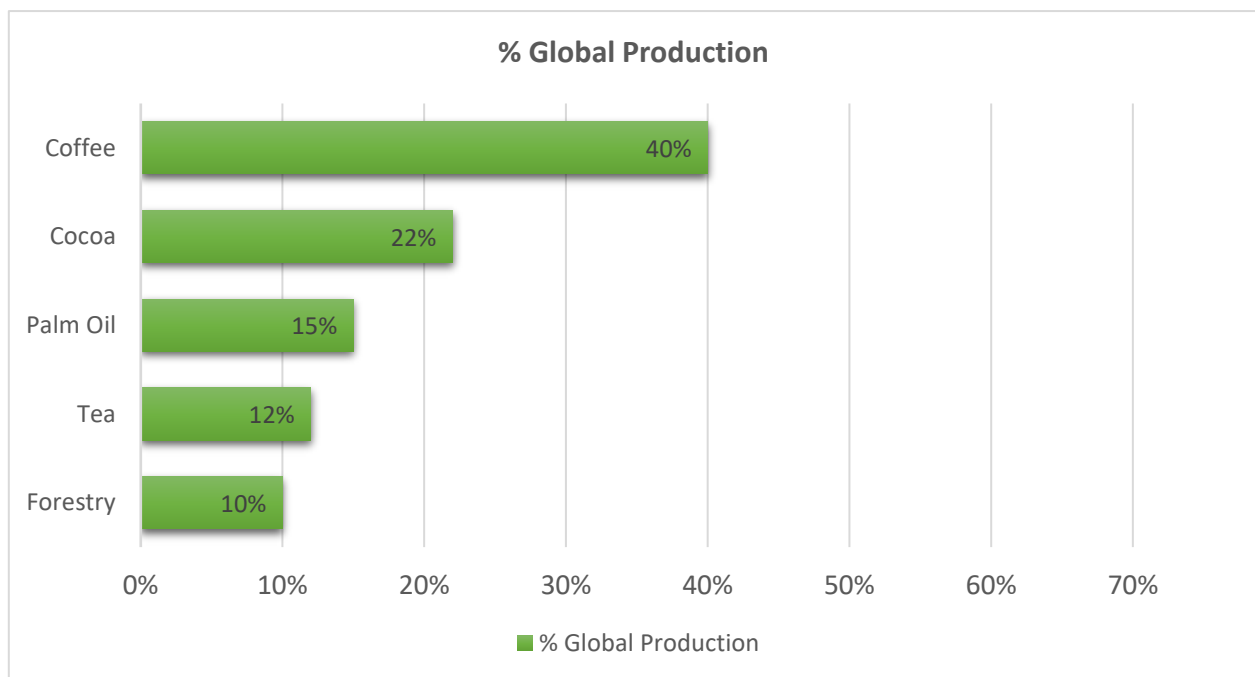
Trade in sustainable commodities has evolved over the last 50 years:

- 1962 - Organic Certification is the seminal standard for sustainable commodity production and trade
- 1988 - Fairtrade labelling draws from the trade-relief models of the 1950s, and national Fairtrade labelling organizations starting with Max Havelaar were the first to emphasize fair prices and trading conditions through a generic standard
- 1990s - Eco-labelling fueled by growing environmental awareness emerged as a vehicle for rewarding good environmental practice but trade in these goods was very limited until the turn of the century
- 2011 - the number of known labels that promise some sort of sustainable product or service tops 435
- 2015 - certification and labelling continues to grow but new models of engagement through “performance commitments” begin to be promoted in an effort to more clearly link investment to demonstrable results

relegated to niche markets (Liu *et al.* 2008). Standards and labels emerged as a means for reducing the burden on individual companies by normalizing responsible practice (Giovannucci and Ponte 2005) and providing a potentially more cost-effective means for making market claims with respect to such practices (Marx 2013; Görg, Hanley, Hoffmann and Seric, 2016). Over the past decade, a growing awareness of sustainability issues has stimulated the interest of larger corporations. The net result has been a growing presence of standard-compliant production across mainstream commodity supply chains (Potts *et al.*, 2014).

There is now a growing and substantial market presence for the nine leading agricultural commodity groups where standards are active. Standard-compliant production has grown across all sectors combined at an average annual rate of 41% per annum between 2008 and 2012 substantially outpacing global commodity growth of 2% per annum for these over the same period.⁵ The International Institute for Sustainable Development (IISD) and other researchers have noted that by 2012 at least five major commodity sectors registered 10% or more of global production as compliant with one or another sustainability standard. See Figure 1 below for details that include coffee: 40%; Cocoa: 22%; Palm Oil: 15%; Tea: 12%; Forestry: 10%. The situation, however, is more complex and probably somewhat less positive than the data might suggest.

Figure 1 Global Production of Agri Commodities Compliant with Sustainability Standards



Source: Based on data from the State of Sustainability Initiatives 2014 (Potts, *et al.*, 2014)

Ethical and Sustainable Standards: The benefits

The growing body of commodity initiatives built on ethical or sustainability standards are attractive because they have offered solutions to some of the intractable problems of development. Building trust has been effective in the past particularly because voluntary standards have successfully

⁵ The key commodities the authors include in this and subsequent analysis (from the State of Sustainability Initiatives Review (2014) are: bananas, cocoa, coffee, tea, sugar, soybeans, palm oil, forestry and cotton unless otherwise noted.

integrated a wide spectrum of stakeholder interests and use independent third party conformity assessments (UNFSS 2013). They have the potential to offer benefits that are central to the concept of sustainable development including:

1. Improved economic conditions and livelihoods for producers (particularly the rural poor)
2. Greater participatory governance in international supply chains
3. Improved social and environmental outcomes

In order to achieve these benefits, the communication of compliance to a standard via a label is supposed to improve market information. In theory, improved market information can in turn stimulate buyer and consumer demand such that natural market forces will drive greater adoption of sustainability practices (Marx, 2013, Potts *et al.*, 2014). As a voluntary, non-regulatory means of achieving a public good, such labels may offer a means of achieving sustainability and are thus worthy of consideration by policy makers (Giovannucci and Ponte 2005). To date, the rather limited science-based measurements of sustainability improvements or impacts have been quite mixed although somewhat positive in the balance (COSA, 2014).

Ethical and Sustainable Standards: The Challenges

Even with the array of potential benefits of ethical or sustainability standards, they continue to face challenges in their acceptance and in their implementation. Despite growth in the array of standards and the volume of compliant production, recent developments signal the potential for both promise and uncertainty in the coming years. The direction of growth presents four significant new challenges to how we identify and manage ethical trade. These challenges may imply a rationale for policy or even regulatory intervention if the objectives of standards are deemed to serve the public good. But, many of the challenges are also within the scope of private resolution and could, conceivably at least, be effectively managed at that level.

1) Supply exceeds consumer demand

Actual levels of consumer demand for products explicitly purchased or traded as ethical or sustainable is considerably lower than the amount being produced. This suggests that consumer information may not be well aligned with producer incentives. More likely, this challenge raises questions that may be more about the nature of demand for sustainable or ethical products rather than for the elasticity of that demand. As evidence, there is little or no financial incentive in terms of a price premium for the vast majority of developing country producers who meet such standards. That is not to say that consumers are not paying a premium, often they are. Premium prices for products from developing country producers are mostly retained within the rest of the supply chain with only a small proportion going to the producers. A key factor affecting this outcome is the limited transparency of most value chains in regard to transmitting to producers the price incentives that are paid by consumers (Potts, 2008).

Shrinking or non-existent price incentives for standards compliance can effectively transform standards that once differentiated into being simple market requirements. The cost of compliance moves to the producers and it is not clear what this means for the developmental agenda in terms of sustainability results except that it makes it dysfunctional for the poor who cannot easily discern and meet the requirements. One aspect of the drive for greater supply is likely coming from the industry, even in the absence of explicit consumer demand at point of purchase. Due to the commodities industry's concern, whether for the wellbeing of producers or for sustainability of

their supplies or for the public perception of the CSR of a sector or a firm, the stimulus to assure more “certified supply” may be a greater current driver for growth.

Another underlying reason for this condition of supply exceeding demand has to do with the following point (challenge #2) that the increasing perception of fungibility between standards makes it easier to have some producers who already meet many of the requirements be “certified” and provide the appearance of considerable advances whereas we may merely have certified producers doing “business as usual” and not improved the overall sectoral conditions.

2) Market pressure to reduce standards’ rigor

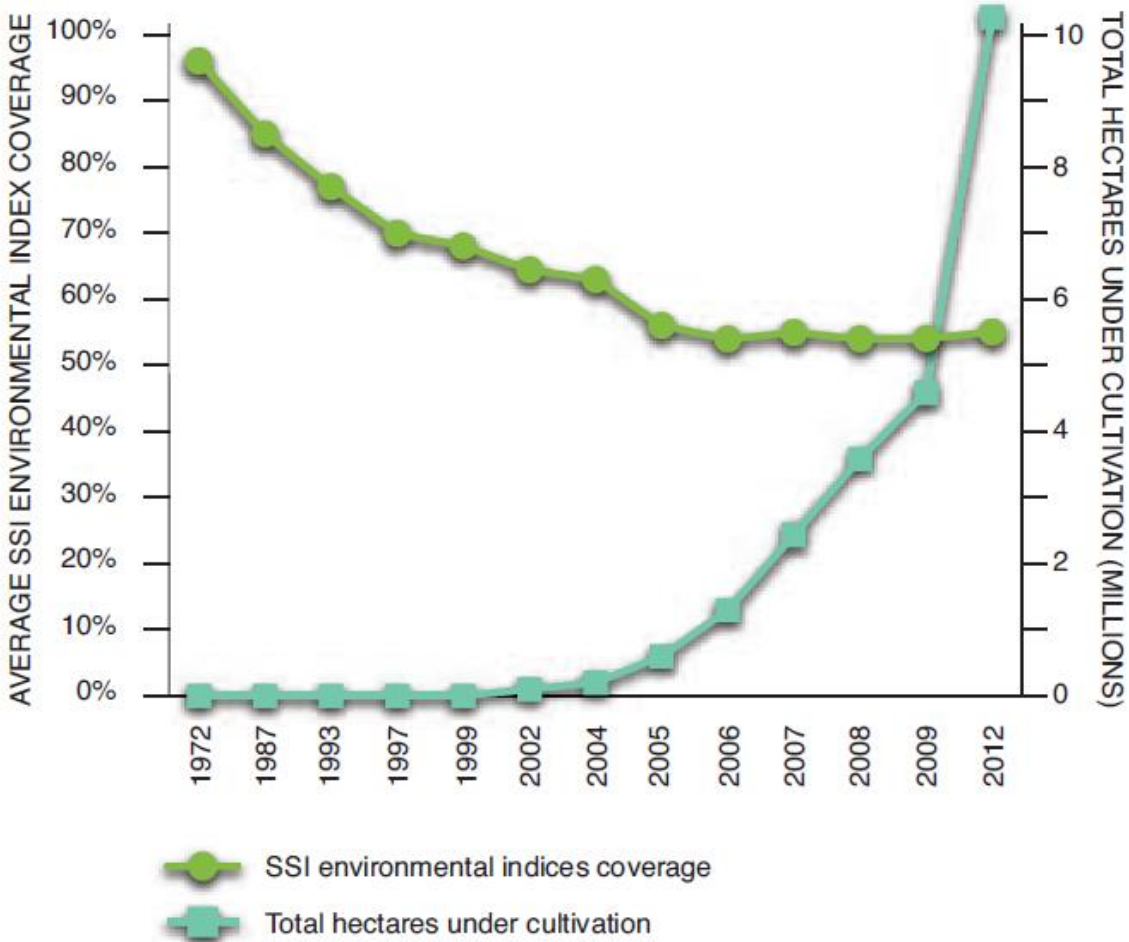
The second challenge is the extent to which outcomes are affected by market pressure to reduce the costs and compliance hurdles of sustainability that is stimulated by mainstream corporations increasingly taking ownership of supply chain sustainability initiatives that, less than a decade ago, were the purview of NGOs or producer organizations.

The push for volume and disincentives to investment thus put downward pressure on the stringency of standards and their systems in order to ensure easy compliance and short term supply. This is important to address because standards differ substantially in their objectives and execution and, of course, their costs but such distinctions may not be evident to procurement departments (Potts et al, 2014). Evidence for this can be seen in the fact that the proportion of the standard compliant production volume that meets the higher standard of being third-party certified (representing the highest level of independence and credibility for market claims) has become considerably smaller than the proportion that is merely verified as compliant across most of the commodity sectors where diverse standards are active. This phenomenon is particularly striking in the case of coffee, with the most standards available, where the certified volumes dropped from nearly 100% a decade ago to account for less than half of the global total in 2012.⁶

Similarly, Figure 2 below presents findings of an IISD study of 16 standards initiatives across 10 commodities. It illustrates a general decline in the average rigor and breadth of environmental requirements as measured by total coverage score averages among existing initiatives at specific points in time. This phenomenon is inversely related to the growth in adoption of certified production.

⁶ Figures based on data from the State of Sustainability Initiatives, 2014. The total portion of certified sustainable coffee in 2012 without accounting for double certification, was 20% of global production. See Potts, et al, 2014.

Figure 2: Global Environmental Coverage⁷ and Growth of Standard Compliant Production

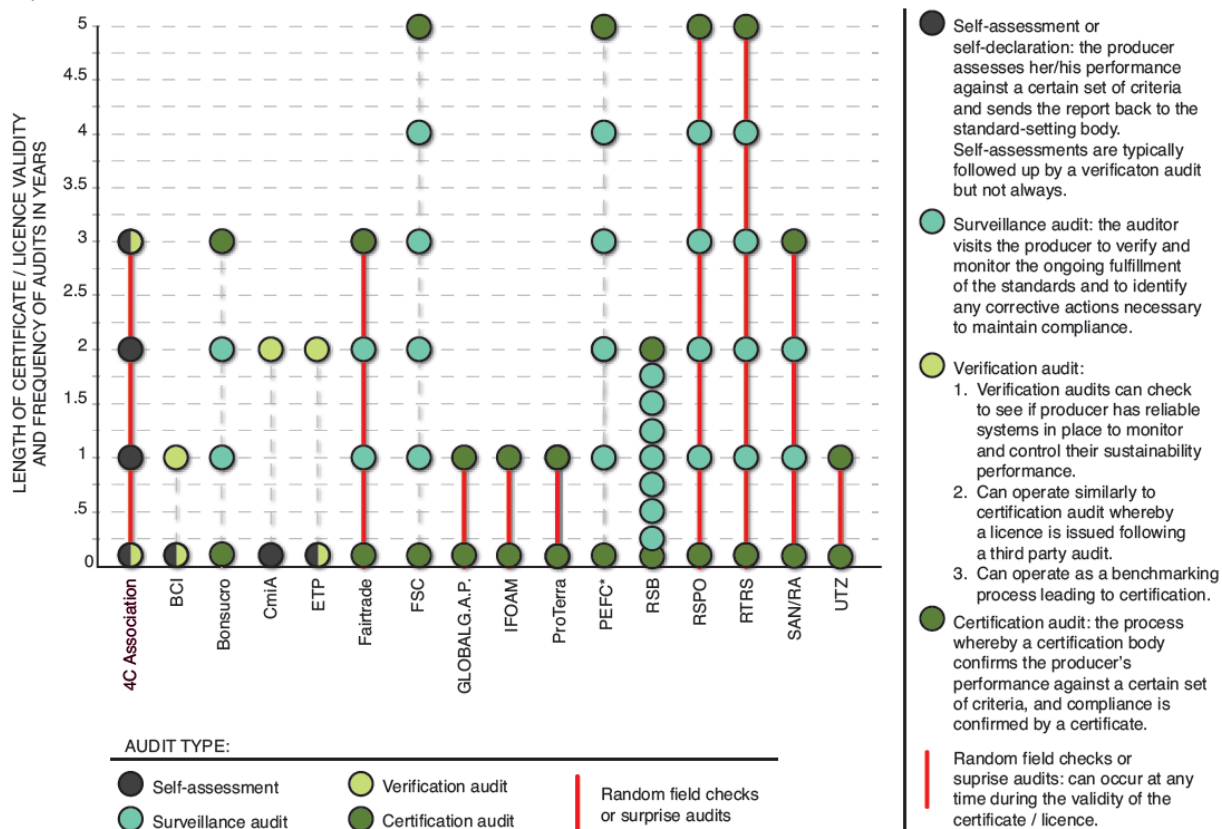


Source: Based on data from the State of Sustainability Initiatives 2014 in Potts, et al, 2014

Figure 3 below covers a range of the most popular standards in agriculture and illustrates the type and timing of their compliance or audit processes. As voluntary standards have developed, they are applying increasingly diverse types of third-party conformity assessment systems for international supply chains. The lack of consistency between systems and unregulated nature of their application leaves considerable room for confusion and can compromise expected results.

⁷ Average SSI environmental index score across major voluntary standards in existence over time operating across the banana, coffee, cotton, cocoa, soy, palm oil, sugar, biofuels and tea sectors.

Figure 3: Popular standards and the type and timing of their compliance



Source: Based on data from the State of Sustainability Initiatives 2014 in Potts, et al, 2014

Standards initiatives have diverse objectives and misperceptions can arise over motivation and credibility as different stakeholders drive the development of voluntary standards and labels (Reinecke, Manning, and Von Hagen, 2012). Typically, sustainability standards tend to be initiated either by companies or NGOs or a combination of the two, each with different effects (Harbaugh, Maxwell, Roussillon 2011; Perez-Aleman and Sandilands, 2008). The degree of influence by any specific interest group can have consequences for the overall scope, priorities and developmental benefit of the resulting effort (Brécard 2014).

Increasingly, firms that cannot demonstrate their due diligence and interest in managing development risks in their supply chains (by, at a minimum, assessing them) may jeopardize not only the growth of an apparently lucrative market but also their own credibility. To the extent that consumers are unable to distinguish between different market claims, the credibility risks taken by any single company or initiative (through, for example, reduced requirements or reduced conformity assessment procedures) can threaten the credibility of the entire group.

3) Going beyond compliance to measuring performance: an issue of effectiveness and trust

The third major challenge facing voluntary standards is the general incapacity to gauge measurable (and statistically significant) improvements in performance outcomes for compliant producers and communities. This is not to say that such outcomes or impacts do not exist, but

simply that the ability of organizations to convincingly document such outcomes tends to be very weak (Blackman and Rivera 2010; Broudera and Gomez-Macpherson, 2014; COSA 2014).

Many operate under the premise of monitoring compliance or “rules of practice” (management standards). Recent research evidence suggests that it is even more important to include “rules of performance” (performance standards).⁸ This approach is grounded on the well-founded recognition that supply chain governance and definitions of sustainability are likely to differ across contexts (Gereffi and Lee 2012). Therefore, merely monitoring compliance fails to determine whether or not defined practices actually result in outcomes that are desirable or sufficient over the longer term.

To drive success, it is vital that we move beyond mere compliance with a set of static standards toward performance measurement that enables a more complete picture of what is working and what is scalable. Timely and accurate data on performance, even for a few key indicators also enables the potential for rapid and continuous improvement. This shortcoming compounds the general weakness of many sustainability standards to generate credible evidence of long-term impact.

The ability of standards to deliver on their potential depends significantly on their ability both to demonstrate impact in improving sustainability and to generate trust among consumers, producers, and corporations alike. Moreover, since the entire value proposition of standards is predicated on trust, the absence of a clear and direct line of causality from design to field level impacts potentially threatens the viability of a movement towards the use of third party standards altogether.

The number of sustainability labeling schemes has now grown to 465 from a handful in the last decade⁹ and, in the absence of guidelines or regulation, such proliferation may increase the risk of some failing to maintain the public trust (Harbaugh, Maxwell and Roussillon 2011). With many competing claims, the credibility and effectiveness of messaging to consumers may become increasingly problematic (Brécard 2014). Since the labels and their claims are mostly unregulated and sparsely studied¹⁰, standards are themselves subject to information scarcity regarding their actual impacts and effectiveness (Blackman & Rivera, 2010; UNFSS 2013; Broudera and Gomez-Macpherson, 2014). This makes it difficult for many of them to learn and make choices that can lead to continuous improvement (Potts *et al.* 2014).

Labels credibility runs the gamut from those with claims that can be clearly substantiated through testing and impact assessment to others that cannot be confirmed or that appear to be “greenwashing”. There is a clear danger for the standards bodies and for consumer and corporate proponents when very different standards cannot be readily distinguished. This problem is emerging in some commodities as some high-volume standards that offer only limited or modest benefits cannot be readily distinguished from other more demanding standards and thus provide a false sense of improvement or actually reduce the reach of the other standards as they displace them (Potts *et al.* 2014).

⁸ The tendency of standards to set rules of practice is analogous to the adoption of a deontological or “principle” based approach to ethics. This is in contrast with the utilitarian approach to ethics which relies on actual consequences. As we note below, market trends are dictating that a greater attention be paid to utilitarian concerns. Accordingly, COSA is collecting evidence across a number of global supply chains that demonstrates that monitoring for performance or impact is necessary if investments are to yield any measurable returns to sustainability initiatives.

⁹ <http://www.ecolabelindex.com/ecolabels/>

¹⁰ While the literature is growing, meta reviews point out that much of it has not met criteria for good research.

Under such circumstances, it will be difficult for trade in sustainability-oriented goods to reliably advance in the absence of clear understanding regarding the performance or the actual impacts of diverse initiatives or labels. This knowledge is equally important for countries, firms, and organizations that have aligned with the Sustainable Development Goals but have few credible ways of measuring performance or achievements toward those goals. There is therefore an emerging need to integrate standard with the measurement of performance and impact.

The growing role of regulation may provide new conditions. In some cases, statutes and legally binding regulations have been formulated to ensure compliance and to convey credibility of practices. Regulation to manage some unsustainable practices has been used with some success in forestry and fisheries¹¹ but governments have not generally shown an interest in regulating such claims in agriculture with the exception of “Organic”.¹² Although one of the perceived assets of voluntary standards is the flexibility they provide to supply chain actors precisely because they are not regulated, it may be that the growing market presence, combined with market confusion, may create the need for some level of legal guidance or oversight.

4) Scaling up: the key role of standardization

Scaling up, first and foremost, requires learning to a reasonable level of understanding about best practices and the critical levers of change in an effort. Understanding performance and understanding impacts is necessary not only for credibility but also to be able to understand how to scale up what works and refrain from what doesn't. This becomes particularly important in the complex systems of smallholder farming.

Where we do have good evidence, a perspective is emerging that despite decades of government, NGO and some corporate involvement to support effective smallholder farming systems in developing countries, the scaling up to a level that becomes integral to trade has so far proven elusive (Jaffee Henson and Rios 2011; Sjauw-Koen-Fa, Blok, and Omtac, 2016).

Increasingly corporations and supply chains are playing a greater role in smallholder systems. The COSA work with a number of multinational operators suggests that they may not, however, be doing so in the most efficient or effective manner. It is relatively simple for them to extract the financial and transactional information that businesses use to operate value chains. It is more difficult to capture the relatively new aspects of data generated from CSR efforts that may not have standardized protocols (Sustainable Food Lab 2015). These can include environmental conditions, living income, workplace practices, and organizational governance.

While diverse contexts make it impossible to provide an overall monolithic assessment of the specific merit of a global standard, it is already clear that, in a number of cases, they can provide significant and measurable value as the Figure 4 below demonstrates (COSA 2014). At the same time, it is equally clear that the data is often inconclusive (Blackman and Rivera 2010; COSA 2014).

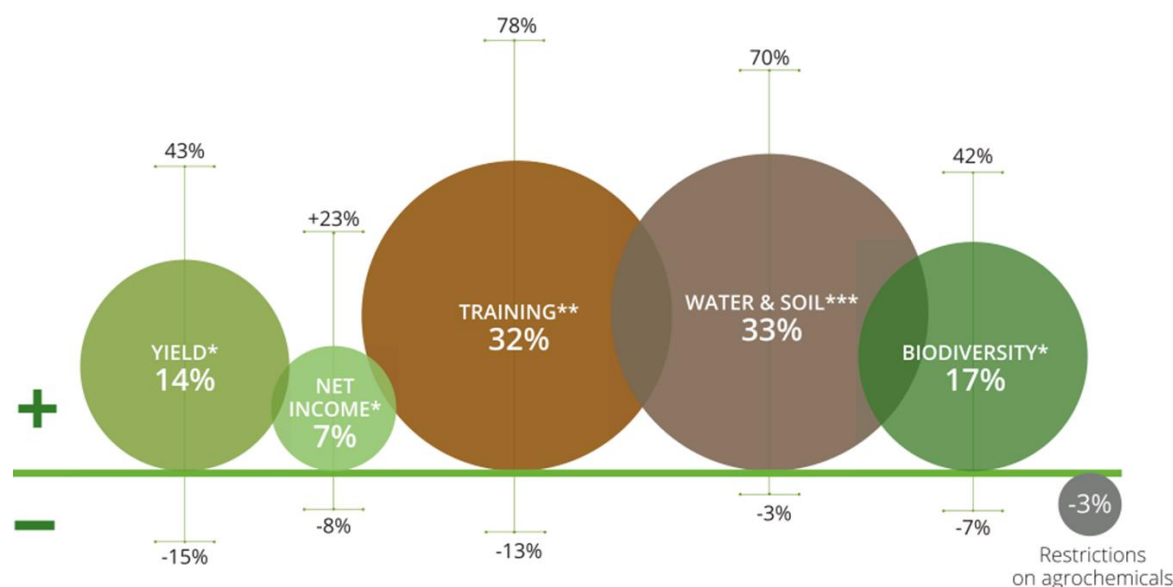
Measuring with consistent methods permits comparability and a transparent understanding in the many diverse contexts where they operate. This is an essential basis for comparison in building

¹¹ E.g. FLEGT and Lacey Act for the prohibition of illegal deforestation. The FAO Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing.

¹² Many countries regulate “Organic” or “Bio” labeling in order to limit fraud.

shared learning over the long term. Outcomes, of course, depend on regional variables and individual circumstances. The capacity of common metrics to gather and track scientific information in a consistent manner provides both policymakers and producers a unique ability to understand the conditions for local success.

Figure 4. Comparison of Sustainability Standards vs. Conventional in Agriculture



Source: Original data and graphic with contextual explanation available in COSA, 2014

∞N.B.: Each data point = 5,200 to 16,000 coffee and cocoa farm surveys with control groups in 5-11 countries 2009-2013. Whisker lines denote variance, asterisks denote level of statistical significance.

Further, farm-level information from smallholders is not easy to get or to assess. Rural areas that may most need the support of ethical supply chain initiatives also tend to be the most isolated and least accessible. Requirements to meet an initial baseline of demonstrable compliance with sustainability standards, under such conditions, can lead to the unintended consequence of actually *excluding* those most in need (Potts et al, 2014). Corporations rarely have a mandate to address the poorest in their supply chains and can be expected to avoid investment there, particularly when it may be difficult to gauge the return on investment (ROI). Moreover, some public-private (NGO and corporate) programs have in recent decades also tended to limit their scope of concern to suppliers directly linked to a given company's supply chain, without any means for pursuing coordinated efforts at the landscape or community level that might be expected to have more long-standing positive impacts (Milder *et al.* 2015).

Without good standardized metrics to understand impact, it is unlikely that our understanding of best practices will grow. In such cases, the growth of standards to drive sustainable or ethical trade may be hindered or may simply be meaningless.

The Future of Sustainable and Ethical Commodities

The trade of commodities designated as ethical or sustainable has been growing exponentially. Voluntary approaches to sustainable or ethical trade offer an array of promises related to the delivery of public and private goods and thus merit consideration by policymakers and corporate decision-makers alike. However, neither the impacts of these efforts nor the interplay between initiatives are well understood. As a result, it is not clear how best to scale-up any efforts or even which efforts have merit.

Since such approaches are largely dependent on buyers, their future will be predicated on moving beyond fragile systems of compliance and the fragmented evidence that currently surrounds existing systems. If the potential merit of such initiatives moving forward is to be realized, decision-makers must have access to more comparable and objective performance data than is currently available through existing conformity assessments.

The need for adequate metrics and their development on the basis of broad public-private consensus is now widely accepted among diverse influential groups ranging from UN agencies and the InterAmerican Development Bank¹³ to the Sustainability Consortium and the Sustainable Food Lab that encompass some of the world's largest and most influential agri-food corporations. Indeed, metrics are likely to be a critical factor to reach scale applications.

Objective data on sustainable development performance is a necessary stepping stone to ensuring that market-based initiatives do not succumb to the race-to-the-bottom forces of the market that they are meant to counteract. Such transparent and comparable data must therefore be fostered and recognized as a public good that is critical to efficiently advance the objective of sustainable development.

The concept of common indicators is not unique: it has been used since the beginning of trade from agreements on weights, currency exchange rates, and physical standards such as grades. In response to the need for greater clarity and accountability, the UN Food and Agriculture Organization also recently devised a set of standardized indicators with COSA and other global organizations – the Sustainability Assessment of Food and Agriculture systems (SAFA).¹⁴

As growth in South-South trade and in emerging economies is leading to a shift in end markets (Gereffi. 2015), there is also likely be an increasing role for more agile market-based assessment tools that are lower cost and offer fast business-friendly utility. To this end, performance monitoring systems are an increasingly vital part of what markets and global value chain managers need to facilitate a useful understanding of sustainable practices.¹⁵

In order for metrics to have optimal impact, accurate information is necessary at two levels. At the local or field level we need accurate information for farms, communities, local organizations and local enterprises. At the macro level, we need to know more about landscape or regional level issues that include climate-change effects (e.g. carbon sequestration, GHG, land use) and of course the market trends in the volume, direction, type and value of sustainable or ethical trade.

¹³ See the multi-stakeholder Sustainable Agriculture, Food and Environment (SAFE) platform's innovative approach to shared metrics adopted by leading firms and NGOs: <http://www.safeplatform.org>

¹⁴ While COSA was a pioneer of common metrics and led the operationalization of SAFA for use on small farms globally, new indicators are regularly being developed which are aimed at measuring different elements of sustainability.

¹⁵ It remains to be seen whether these market drivers will be able to continue to promote the requisite level of independence, objectivity and rigor to produce meaningful results.

In the broader realm of market and macro-trends data, the International Institute for Sustainable Development has led a consortium of stakeholders under the State of Sustainability Initiatives (SSI)¹⁶ to provide sectoral and thematic coverage of voluntary sustainability standards operating across major agri-food commodities. They have further established a partnership embedded within the UN framework and dedicated specifically to consistent annual reporting in key markets under the “State of Sustainable Markets.”¹⁷ But even here, the data collection process faces a series of ongoing challenges—most notably, the absence of clear and regularly collected consumption and trade data. In order to address these gaps focused new initiatives are being piloted in an effort to leverage the potential of big data to serve the common good.¹⁸

In the realm of farm and community level assessments, the Committee on Sustainability Assessment (COSA) is a non-profit consortium of organizations that develops and shares rigorous assessment tools to generate science-based information on the social, economic and environmental impacts of sustainability practices.¹⁹ One of its defining elements is a framework of practical indicators that are drawn from multi-stakeholder consultations and align with the SDGs and existing major international agreements for neutrality.

Ultimately it must be recognized that gathering such information, whether at the field level or the macro level, comes at a cost. It is also clear that the data collection and reporting priorities of private actors may not be aligned with public sector needs, making it difficult to secure the requisite resources for ongoing public reporting from the supply chain itself. Information on the impacts and market performance of voluntary initiatives is a form of public good which will remain a scarce resource provided at suboptimal levels in the absence of clear and long-term investment by the public sector.

¹⁶ The International Institute for Sustainable Development along with several NGOs and multilateral agencies provide the basis for the SSI’s annual collection and dissemination of data.

¹⁷ The State of Sustainable Markets is a joint initiative of the International Institute for Sustainable Development, the International Trade Center and the Research Institute of Organic Agriculture (FiBL).

¹⁸ For example, the Coffee Data Network and the Carbon Impact Factor are two initiatives seeking to gather data through individual supply chain actors allowing for enhanced traceability and accounting of supply from source to consumer.

¹⁹ The Swiss Government (SECO) and an array of agencies such as the Inter-American Development Bank and Ford Foundation support the development of COSA, its tools, and field work.

References

Blackman, Allen and Jorge Rivera (2010) The Evidence Base for Environmental and Socioeconomic Impacts of 'Sustainable' Certification. Washington DC: Resources for the Future

Brécard Dorothée (2014) Consumer confusion over the profusion of eco-labels: Lessons from a double differentiation model. *Resource and Energy Economics*. Volume 37: 64–84

Broudera, Sylvie and Helena Gomez-Macpherson (2014) The impact of conservation agriculture on smallholder agricultural yields: A scoping review of the evidence In "Evaluating conservation agriculture for small-scale farmers in Sub-Saharan Africa and South Asia" (Eds. James Stevenson, Rachid Serraj and Kenneth Cassman). *Agriculture, Ecosystems & Environment*: Volume 187:11–32

Brundtland, G. H. (1989) Global Change and Our Common Future. Benjamin Franklin Lecture in Washington D.C. (2 May 1989). *Environment: Science and Policy For Sustainable Development* Vol. 31:5

COSA (2014) The COSA Measuring Sustainability Report: Cocoa and Coffee in 12 Countries. Philadelphia, PA: The Committee on Sustainability Assessment

Crane, Andrew, Dirk Matten and Laura J. Spence (2008) Corporate social responsibility: readings and cases in a global context. Eds. A. Crane, D. Matten, L. Spence. London: Routledge

Freeman, R. Edward (1984). Strategic Management: A stakeholder approach. Boston: Pitman. ISBN 0-273-01913-9.

Görg, Holger, Aoife Hanley, Stefan Hoffmann, and Adnan Seric. (2016) When do multinational companies consider corporate social responsibility? A multi-country study in Sub-Saharan Africa. Robert Schuman Centre for Advanced Studies Research Paper No. RSCAS 3.

Gereffi, Gary and Joonkoo Lee (2012) Why the World Suddenly Cares About Global Supply Chains. *Journal of Supply Chain Management* Vol 48 (3) 24-32

Gereffi, Gary (2015) Global value chains, development and emerging economies. Working paper 10. UNIDO/United Nations University Maastricht Economic and Social Research Institute on Innovation and Technology

Giovannucci, Daniele, Oliver von Hagen, and Joseph Wozniak. (2014) Corporate Social Responsibility and the Role of Voluntary Sustainability Standards. In Voluntary Standards Systems – A Contribution to Sustainable Development. (Eds Carsten Schmitz-Hoffmann, Michael Schmidt, Berthold Hansmann and Dmitry Palekhov) Berlin: Springer Publishing

Giovannucci, Daniele and Stefano Ponte. (2005) The Collective Formulation and Effectiveness of Public & Private Sustainability Standards. In *Food Policy Journal* (Vol 30 Issue 3), "Private Agri-food Standards: Implications for Food Policy and the Agri-food Systems".

Harbaugh, Rick John W. Maxwell, Beatrice Roussillon (2011) Label Confusion: The Groucho Effect of Uncertain Standards. *Management Science* 201157:9: 1512-1527.

Henson, Spencer, and John Humphrey. (2010) Understanding the complexities of private standards in global agri-food chains as they impact developing countries. *The journal of development studies* 46, (9): 1628-1646.

Hopkins, Michael (2012) Corporate social responsibility and international development: is business the solution? London: Earthscan

Jaffee Steven, Spencer Henson, Luz Rios (2011) Making the grade: smallholder farmers, emerging standards, and development assistance programs in Africa (a research program synthesis). World Bank

Liu, Pascal, Alice Byers, and Daniele Giovannucci (2008) Value-Adding Standards in the North American Food Market - Trade Opportunities in Certified Products for Developing Countries. Rome: FAO Trade and Markets Division

Marx, Axel (2013) Varieties of legitimacy: a configurational institutional design analysis of eco-labels. *Innovation: The European Journal of Social Science Research* 26, (3): 268-287.

Matten, Dirk and Jeremy Moon (2008) "Implicit" and "Explicit" CSR: A Conceptual Framework for a Comparative Understanding of Corporate Social Responsibility. *Academy of Management Review* April 1, Vol. 33 (2): 404-424

Milder, Jeffrey, Margaret Arbuthnot, Allen Blackman, Sharon Brooks, Daniele Giovannucci, Lee Gross, Elizabeth Kennedy, Kristin Komives, Eric Lambin, Audrey Lee, Daniel Meyer, Peter Newton, Ben Phalan, Götz Schroth, Bambi Semroc, Henk Van Rikxoort and Michal Zrust (2015) An agenda for assessing and improving conservation impacts of sustainability standards in tropical agriculture. *Conservation Biology* 29 (2): 309-320.

Öberseder, Magdalena, Bodo Schlegelmilch, and Patrick Murphy (2013) CSR practices and consumer perceptions. *Journal of Business Research* 66 (10): 1839-1851.

Olinto, Pedro Kathleen Beegle, Carlos Sobrado, and Hiroki Uematsu (2013) The State of the Poor: Where Are The Poor, Where Is Extreme Poverty Harder to End, and What Is the Current Profile of the World's Poor? Wash., D.C.: World Bank

Pedersen, Esben and Mette Andersen (2006) Safeguarding corporate social responsibility (CSR) in global supply chains: how codes of conduct are managed in buyer-supplier relationships. *Journal of Public Affairs* 6.3-4: 228-240.

Perez-Aleman, Paola, and Marion Sandilands (2008) Building value at the top and the bottom of the global supply chain: MNC-NGO partnerships. *California Management Review* 51.1: 24-49.

Porter, Michael and Mark Kramer (2011) Creating shared value: Redefining capitalism and the role of the corporation in society. *Harvard Business Review* (Jan) HBS

Potts, Jason (2008) Alternative trade initiatives and income predictability: Theory and evidence from the coffee sector. Winnipeg: IISD.

Potts, Jason, Matthew Lynch, Ann Wilkings, Gabriele Huppe, Maxine Cunningham, Vivek Voora (2014) The State of Sustainability Initiatives Review 2014: Standards and the Green Economy Winnipeg: IISD and IIED.

Reinecke, Juliane, Stephan Manning, and Oliver Von Hagen (2012): The emergence of a standards market: Multiplicity of sustainability standards in the global coffee industry. *Organization Studies* Vol 33 (5-6) 791-814.

Sjauw-Koen-Fa, August, Vincent Blok, and S.W.F. Omtac. (2016) Critical Success Factors for Smallholder Inclusion in High Value-Adding Supply Chains by Food & Agribusiness Multinational Enterprises. *International Food and Agribusiness Management Review* Vol 19 (1)

Sustainable Food Lab (2015) Towards a Shared Approach for Smallholder Performance Measurement: Common indicators and metrics. Online:
<http://www.sustainablefoodlab.org/performance-measurement/tools-resources/deep-dive/>

United Nations Forum on Sustainability Standards (2013) Voluntary Sustainability Standards: Today's landscape of issues & initiatives to achieve public policy objectives Geneva: UNFSS