

## Global Sustainable Development Report 2015 Science Briefs: How New Metrics for Sustainable Agriculture Can Align the Roles of Government and Business

*Daniele Giovannucci, President, Committee on Sustainability Assessment, and Friedrich von Kirchbach, former Director, the International Trade Centre\**

### What we don't know about critical aspects of sustainability

In three decades the potential for the private sector to make a positive difference in development has garnered increasing credence and support (Schmidheiny 1992; Porter, Ketels, & Delgado 2007). This aligns with increasing acceptance that being sustainability-oriented can also benefit a firm's market performance (Eccles et al. 2011). It is clear that the private sector will have to be an important part of any effort to attain the proposed Sustainable Development Goals (SDG). It has likewise become clear that for agricultural producers merely participating in markets or trade is not sufficient to ensure poverty reduction and increase sustainability (Hopkins 2007; Jaffee et al. 2011).

In agriculture, Voluntary Sustainability Standards (VSS)<sup>1</sup> have emerged to address this and they offer an explicit articulation of specific objectives - such as production practices, environmental benefits, or labor conditions - for farmers and value chains as well as the mechanisms to certify or audit those. The VSS therefore serve consumer needs and simultaneously support the role of the state by providing a valuable public good as the only codified and readily verifiable market mechanisms that ensure and communicate key aspects of sustainability (Dragasanu *et al.* 2014). Tools such as VSS are increasingly a part of

many markets<sup>2</sup> accounting for double digit growth rates and billions of dollars in retail trade for crops ranging from coffee, palm oil, and cocoa to cotton, sugar, and tea (SSI 2014). If they could reliably serve to achieve greater levels of sustainability then they would warrant being utilized widely to fulfill policy objectives that otherwise may require enormous expenditures of resources by the public sector.

Although the VSS can serve as a bridge between public and private interests (Milder *et al.* 2014), the mechanisms and the dynamics for this are not well understood (Giovannucci and Ponte 2005) and a critical gap to consistently measure their actual performance is missing. When they have been measured with scientifically credible instruments the VSS do not always perform as expected. Of course, it would be unrealistic to hold current VSS accountable for achieving major development objectives ranging from improving livelihoods to securing biodiversity when they typically still have minimal funding and resources. As these VSS approaches have grown in size and influence, the extent to which they actually fulfil sustainability objectives, and at what cost, needs to be understood better.

While early literature consistently claimed that VSS could serve as tools to achieve greater levels of sustainability, some recent studies note that livelihoods do not necessarily improve and there may not be a sufficient return on investment in terms of better social and environmental conditions (Ruben & Fort 2012; Blackmore *et al.* 2012). Many VSS assume a

---

<sup>1</sup> In agriculture the most well-known include Organic, Fair Trade, Rainforest Alliance, and Utz Certified.

---

<sup>2</sup> There are more than 430 market-oriented "eco-labels" that claim some aspect of sustainability.

level of capacity, both technical and financial, that is not always available among the poorest farmers. Accordingly, VSS and indeed many standards may not provide much benefit to the poorest and the role of public support to VSS in value chains has been questioned.

Understanding under what conditions the VSS do or do not perform as designed is therefore an important question that requires reliable and comparable metrics to determine a clear answer. Equally important is the need to cost-effectively measure the performance of VSS and of any sustainability initiative. The research literature is clear about one thing: that the lack of comparability and narrow research designs makes it very difficult to determine the usefulness or the effectiveness of the VSS and their certification or verification systems. For example, scientific reviews of multiple studies have found that many have flawed protocols or counterfactual claims (Blackman and Naranjo 2010; Tallontire *et al.* 2012). There are also very few validated forms of measurement that fully capture the complexities of agriculture systems. Dragusanu *et al.* (2014) claim that research often fails to capture the intertwined economic, social and environmental multi-dimensionality of sustainability initiatives. The lack of comparability and holistic understanding and limited familiarity therefore hampers our understanding of whether sustainability initiatives are indeed effective. From a policy perspective and from a business perspective, there is considerable benefit to resolving this issue. Already a number of efforts are under way.

### **The right metrics and methods can drive sustainability: evidence and useful directions**

There are numerous examples in the development literature of the importance and direct benefit of good impact assessment (Masset *et al.* 2013; Kelsey 2013; Duflo *et al.* 2008). However, understanding must not remain only at the policy level; we must put reliable and low-cost metrics into the hands of

every-day decision-makers. Understanding impacts at a practical level of farmers, communities and value chains is a necessary pre-requisite in order to best determine what policy and investment decisions could optimize the results. To do so will require three components:

1. **Indicators that are validated to all international norms and widely comparable.** Building our knowledge in a reliable manner requires transparent and consistent indicators and methodologies that are designed with scientific rigor and that can capture multi-dimensionality of economic, environmental, and social observations.
2. More investment in the long-term **capacity of leading institutions** in developing countries to help ensure their participation and eventual leadership in any assessments and to help drive the levels of research quality.<sup>3</sup> Besides the intrinsic institutional development benefits, this also can help to improve contextual validity and reduce the costs of information as multiple projects or supply chains utilize the same local institutions.
3. **Low cost Performance Monitoring** that is standardized and auditable, needs further development to permit just-in-time reporting as management tools (for both business and development projects) offering easy access to basic sustainability information. These tools help to map the likely impact pathways and help ensure that sustainability efforts are on track long before an impact assessment can occur.

---

<sup>3</sup> Leading entities such as the Jameel Poverty Action Lab (J-PAL at MIT) and the International Initiative for Impact Evaluation (3ie) are among those fostering such approaches

Common indicators, capable local institutions, and Performance Monitoring already exist, along with emerging best practices. Developing them further and propagating the use of good metrics can benefit everyone: policymakers benefit from evidence-based decision-making; producers benefit from understanding what works and what does not to reduce experimentation and risk in adopting new practices; managers and researchers profit from the ability to review data in a more transparent manner and benchmark findings with others more readily; finally, donors and funders would benefit from faster learning and lower evaluation costs. Milder *et al.* (2014) note that common metrics can significantly benefit the environmental community since VSS and related initiatives influence agricultural intensification, deforestation, and biodiversity.

Diverse and influential organizations are already collaborating toward such common indicators and consistent Performance Monitoring. The Sustainable Food Lab, an organization with more than 80 members that include leading companies such as Unilever, Danone, Starbucks, and PepsiCo, is collaborating on these approaches with The Committee on Sustainability Assessment (COSA). ISEAL, the umbrella organization for leading VSS including Fairtrade International, Marine Stewardship Council, Rainforest Alliance, Forest Stewardship Council and the Sustainable Agriculture Network is also collaborating with COSA on a very similar set of indicators and methods and integrating other leaders including MIT's J-PAL and 3ie.

Leading development agencies and donors such as the InterAmerican Development Bank's Multilateral Investment Fund, the Food and Agriculture Organization of the UN (FAO), and the Ford Foundation are piloting programs that incorporate indicators and approaches fostered by the COSA Consortium. They have also been adopted by prominent producer organizations such as the National Federation of Coffee

Growers of Colombia with more than 500,000 members.

As more organizations take on such common approaches and help to improve and evolve them, more institutions are being trained to work with them in developing countries (e.g. University of Ghana, Vietnam Institute of Policy and Strategy for Agriculture and Rural Development, Indian Institute of Plantation Management, International Institute for Tropical Agriculture). The more than three dozen institutions that partner in the COSA Consortium are also advancing comparable methods. The collective impact could be considerable, especially as both public agencies and companies with extensive global supply chains adopt such methods.<sup>4</sup>

The experience with the Millennium Development Goals bears witness to the central importance of monitoring and measuring progress against goals. The current discussion and drive toward the Sustainable Development Goals and in particular a new goal on sustainable production and consumption, has a more inclusive focus encompassing every level of society. Therefore, simple, transparent, and science-based metrics must be put into the hands of many more actors if the Goals are to be widely monitored and more effectively pursued. Reliable information will be required to provide a common understanding and clear communication for the benefit of consumers, supply chains, and policy makers about the progress of initiatives. As such, standardized measures can serve to help democratize data and to accelerate the understanding of sustainability among all stakeholders. This public good – likely to be more effective and less costly than either public research or regulatory interventions – warrants coordinated and substantial investment in resolving the knowledge gap about sustainability.

---

<sup>4</sup> Mondelez (ex-Kraft), Nespresso, McDonald's are among those that currently make use of COSA indicators and approaches.

## References

- Blackmore, E. and J. Keeley with R. Pyburn, E. Mangus, L. Chen, and Q. Yuhui. 2012. Pro-poor certification: assessing the benefits of sustainability certification for small-scale farmers in Asia. IIED, London.
- COSA. 2013. The COSA Measuring Sustainability Report: Cocoa and Coffee in 12 Countries. Philadelphia, PA: The Committee on Sustainability Assessment.
- Duflo, E., M. Kremer, and J. Robinson, "How High Are Rates of Return to Fertilizer? Evidence from Field Experiments in Kenya." *American Economic Review: Papers & Proceedings* 2008, 98:2, 482–488
- Dragusanu, R., D. Giovannucci, and N. Nunn. 2014. The Economics of Fair Trade. *Journal of Economic Perspectives*.
- Eccles, R., I. Ioannou, and G. Serafeim. 2011. "The Impact of Corporate Sustainability on Organizational Processes and Performance." Working Paper 12-035. Boston, MA: Harvard Business School.
- Giovannucci, D. and S. Ponte. 2005. "The Collective Formulation and Effectiveness of Public & Private Sustainability Standards." *Food Policy Journal*, Vol 30 Issue 3.
- Hiscox, M., M. Broukhim, C. Litwin, and A. Woloski. 2011. "Consumer Demand for Fair Labor Standards: Evidence from a Field Experiment on eBay." Harvard University.
- Hopkins, M. 2007. Corporate Social Responsibility and International Development: Is Business the Solution? Earthscan: London.
- Jaffee, S., S. Henson, and L. Diaz-Rios. 2011. Making the Grade: Smallholder Farmers, Emerging Standards, and Development Assistance Programs in Africa. World Bank, Washington, D.C.
- Jack, B. Kelsey. 2013. "Constraints on the adoption of agricultural technologies in developing countries." Literature review, Agricultural Technology Adoption Initiative, J-PAL (MIT) and CEQA (UC Berkeley).
- Manos, B., T. Bournaris, C. Moulgianni, and S. Aramatzis. 2013. IA tools applied to impact assessment of EU policies in agriculture and environment. *International Journal of Environment and Sustainable Development*. Volume 12 Issue 2 p. 103-123
- Masset, E., L. Haddad, A. Cornelius, and J. Isaza-Castro. Effectiveness of agricultural interventions that aim to improve nutritional status of children: systematic review. *British Medical Journal* 2012; 344
- Milder, J.C., M. Arbutnot, A. Blackman, S.E. Brooks, D. Giovannucci, L. Gross, E.T. Kennedy, K. Komives, E.F. Lambin, A. Lee, D. Meyer, P. Newton, B. Phalan, G. Schroth, B. Semroc, H. van Rikxoort, and M. Zrust. 2014. "An agenda for assessing and improving conservation impacts of sustainability standards in tropical agriculture." *Conservation Biology*.
- Nelson, V. and Martin, A. 2011. Impact Evaluation of Social and Environmental Voluntary Standard Systems (SEVSS): Using theories of change, Natural Resources Institute, University of Greenwich: Chatham.
- Porter, M., C. Ketels, and M. Delgado. 2007. The Microeconomic Foundations of Prosperity: Findings From the Business Competitiveness Index. The Global Competitiveness Report 2007–2008.
- Ruben, R. and R. Fort. 2012. "The Impact of Fair Trade Certification for Coffee Farmers in Peru," *World Development*, 40 (3): 570-582.
- Schmidheiny, S. 1992. Changing course: A global business perspective on development and the environment (Vol. 2). MIT press.
- Tallontire, A., V. Nelson, J. Dixon and T. Benton. 2012. "A Review of the Literature and Knowledge of Standards and Certification Systems in Agricultural Production and Farming Systems." NRI Working Paper Series on Sustainability Standards No. 2. University of Greenwich: Chatham.