Principles and Characteristics of the COSA System

COSA
Committee On Sustainability Assessment

A Concise Introduction

Principles and Characteristics of the COSA System

This is a brief overview of the basic principles and characteristics of the COSA System for research. It complements the related overview of **"COSA Methods"** which more explicitly outlines the steps, science, and processes that we undertake.

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COSA Principles

COSA has a well-established framework for performance monitoring and impact evaluation. Our approach to more effective measurement stems from our commitment to sustainability that is both practical and business-like in its perspective. Being effective is not just about being practical, it also manifests as core COSA principles that maximize value for all stakeholders. These include:

1. Being **rigorous**, regardless of methodologies used
2. Being **respectful** towards the people and place we evaluate or research. These are not subjects in the process but rather participants
3. **Measuring what matters** for decision-making

These values relate to ideas of "Impact Investing", "Lean Research", "Client-Centric", and "Applied or Bottom-up" research but go beyond concepts to the use of tested tools and modules that achieve results. Three fundamental principles define the approach that has been developed by the members of the Committee and that are currently in common use:

1. Local capacity - for context and relevance

To achieve local relevance and a richer contextual understanding, we integrate local or national partner institutions and the producer groups themselves

One of the risks of a global framework for sustainability assessment is the potential to lose its relevance to local conditions. COSA takes into consideration the essential local context and conditions and minimizes this risk with an intensive adaptation process. This includes converting data collection points to local units, translating to local languages, and rephrasing survey questions to achieve results that are not only accurate locally, but provide meaningful equivalents for the global indicator set. Furthermore, we view research partners to be among the most qualified to actively participate in the data collection, cleaning, and analysis, as understanding the local context is immensely helpful in each of these stages. This local participation opens the door for the information to then be used and integrated into local knowledge and practices.

2. A multi-dimensional view - offers a better understanding

A multi-dimensional view is vital in order to understand and manage the inevitable choices and trade-offs of the three pillars of sustainability (social, economic, environmental)

There is a tendency to oversimplify sustainability, and its intrinsic complexity makes this understandable. Although it is tempting to just measure one or a few factors such as farm yields, income, or biodiversity as the proxy for sustainability, the reality is that sustainability, by definition, necessitates balancing social, environmental, and economic needs. Any measurement that does not take this holistic view into account is simply not assessing sustainability. For example, if higher yields are achieved by clear-cutting forested areas, which then results in soil erosion, silted waterways, and the loss of timber and firewood for the surrounding communities, it may not be a sustainable outcome. This can present quite a challenge for projects or investments whose focus is limited to only one or two desired outcomes so managing the unexpected outcomes is important.

We can engage a variety of methods ranging from simple cross-tabulations of data points to stochastic frontier analysis and to relational analysis with, for example, the integration of the Progress out of Poverty Index (PPI) or the Multidimensional Poverty Index (MPI).

3. A consistent set of core indicators - takes learning to a new level

Using a consistent set of core indicators facilitates global learning and comparison

Using standardized indicators permits continuous refining of how to measure core and common items such as cost of production or yields or biodiversity. Improving how we inquire about a topic not only improves the quality of the data but also reduces noise in data that can come from different ways of asking about or measuring indicators. COSA sees this as an asset and not as a straightjacket because it is always possible to add more indicators or to adapt questions as necessary. Ultimately, a standardized process facilitates comparison and global learning.

The COSA System

The COSA System is built around three major steps that allow for a complete approach to measuring and understanding sustainability. Figure 1 illustrates the system and the details are covered in a separate document **"COSA Research Methodology"**

Figure 1: The COSA System and its Main Components

Define the Pathway

Developing a realistic understanding and practical pathway to sustainability

- Aligning with international norms
- SMART standardized indicators
- Multi-dimensional framework: environmental, social and economic

Gather the Facts

Ensuring you have the right info at the right time

- Vetted Surveys
- Digital data capture and geospatial mapping
- Building local capacity and global standardization
- Performance monitoring tools

Answer and Advise

Employing broad experience and advanced analysis to ensure you get the most out of the data

- Credible scientific analysis
- Knowledge base and benchmarking
- Customized KPI management dashboards
- Better informed policies

Factors that Inform COSA work

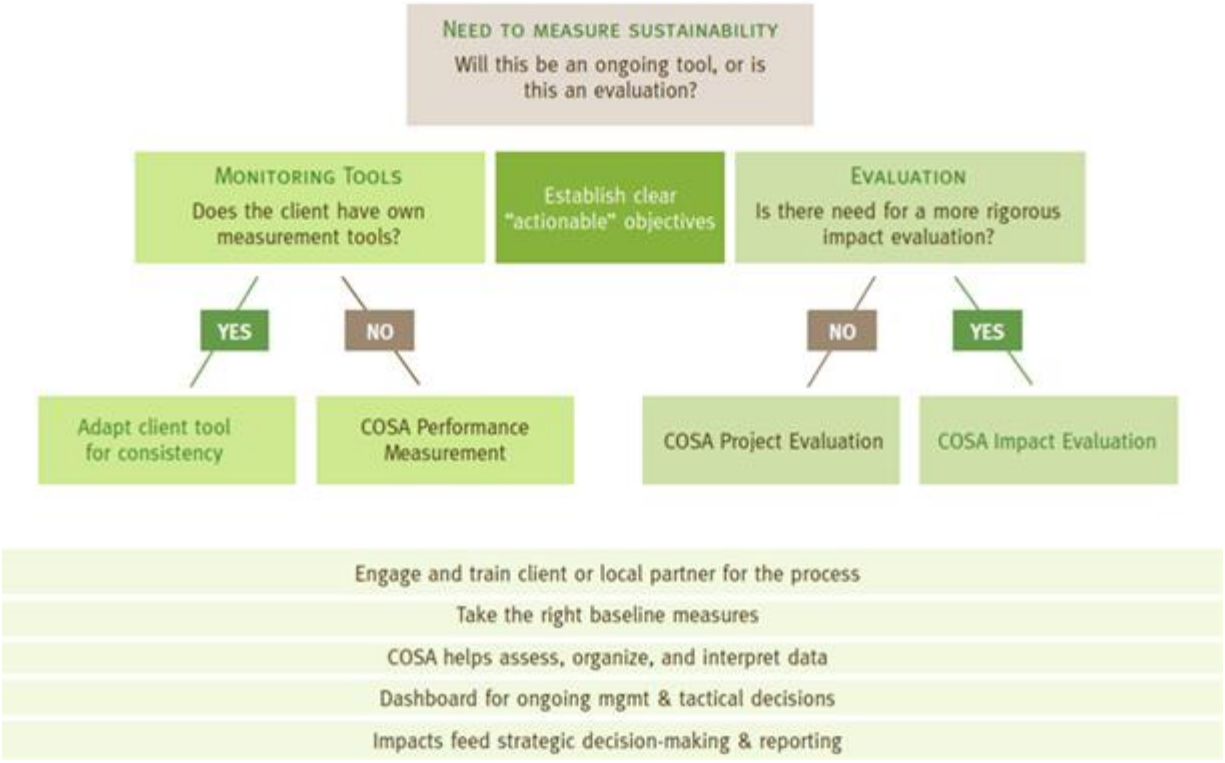
The COSA System is informed by several consistent approaches and guidelines to monitoring and assessment.

Measuring Actual Performance or Field Outcomes

While a fair bit is known bit about supply chains, much less is known about the effect of sustainability standards on farms and farmers. Rather than solely assessing practice-based indicators or compliance with a policy or the requirements of specific standards, COSA assesses

the functional reality of farmers and their farms and prefers performance-based approaches. These include simple Performance Monitoring to complex Impact Evaluation.

Figure 2: Comparing Performance Monitoring vs. Impact Assessment



Neutral and Inclusive Perspectives

COSA, as a broad alliance, insists on a neutral set of indicators and a multi-criteria analytic strategy to tell the story of sustainability. In principle, researchers can use COSA data to feed into a vast array of analyses including Life Cycle Analysis, cost-benefit analysis, Instrumental Variable Analysis, or nearly any other framework in order to facilitate understanding. COSA encourages such diversity as a vital source of learning and does not align itself with any particular analytic approach.

One of the main challenges of assessing sustainability in agriculture is accounting for its inherent complexity. To show the necessary facets of the story, the COSA employs more than a hundred indicators which were developed with input from many stakeholders including farmer groups, scientists, NGOs and standards bodies, private companies, and development agencies.

Understanding the Theory of Change

Understanding the objectives and processes that are associated with an intervention is a fundamental step in measuring whether that approach resulted in the desired impact. A "Theory of Change" essentially describes the types of interventions and the processes that are planned or required to bring about a given objective. It is much more than a mission statement; it helps explore the assumptions and also determine the specific interventions or inputs that an investment or project will require and how they will combine to achieve the desired result. Although the theory

of change creates a necessary basis for accurate assessment of the specific interventions or the opportunities that are being created, and their connections to the outcomes such as the practices or the behavior changes that were adopted, it is often overlooked or inadequately established.[1]

Establishing a strong theory of change for a project or organization usually begins with the goal and works backwards to identify the appropriate intervention though scientific theory, local context, academic literature, and common sense. One way to look at an impact assessment is that we are testing this theory of change against reality according to measurable indicators. The theory of change establishes the hypotheses that one part of an impact assessment will test.

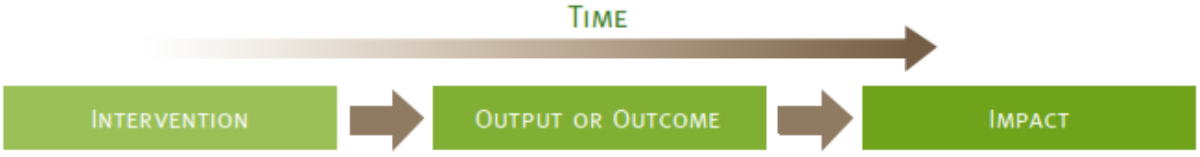
A good assessment starts with measuring the stated objectives or the theory of change but does not stop there. The inherent complexity of impacts also highlights the importance of understanding the expected and unexpected consequences that may not be captured in such a theory or intentions. A hallmark of COSA is that it measures a range of diverse factors that affect sustainability in agriculture – not just those proposed by the theory of change. Therefore, it is important in the analysis to pay attention to each indicator, as unexpected stories often emerge from the data. We begin with the theory of change as a good starting point to anchor an assessment since it is possible to get overwhelmed when approaching complex sustainability analyses.

Understanding Key Terms: Impact, Outcomes, and Interventions

The word "impact" and related terms carry specific meaning in the field of assessment and evaluation.[2] A brief discussion of the basic process or terminology as it relates to a sustainability-focused intervention is useful for clear communication.

- *Interventions* or *Inputs* are the resources and activities used to carry out or execute a project or intervention, and can include financing, know-how, and training.
- *Outputs* or *Outcomes are* the direct, immediate or short-term result of the intervention and can include, for example, the adoption of different cultivation practices, new organizational practices, or the use of new post-harvest methods.
- *Impact* is defined as the intended or unintended long-term effects (positive and negative) that can be attributed to a specific intervention or output and can include improved aspects such as competitiveness, ecosystem health, or consistently higher levels of net income.

Figure 3 Measuring Well: Interventions and Outcomes Differ from Impacts



[1] http://www.theoryofchange.org

[2] Organizations such as the International Association for Impact Assessment, International Initiative for Impact Evaluation, and MIT's Jameel Poverty Action Lab generally define impact, as COSA does: the intended or unintended longer-term effects, both positive and negative.

Impacts can be complex and far-reaching, especially when capturing both the intended and unintended effects. It is often more correct to say that an impact is the result of multiple contributions rather than to identify it as the result of a single attribution.[3] To this end, COSA maintains that it is vital to conduct assessments from a more holistic perspective that integrates the economic, environmental, and social dimensions.

Impacts are also best understood when measured over time because important factors, such as environmental and social indicators, can be slow to register significant change. COSA develops longitudinal datasets from repeated data collection efforts with its research partners. Ideally, these datasets are true panel datasets, as they involve the same producers in each round of surveying.

Value and Limitations of Case Studies

From a methodological perspective, carefully designed case studies can offer useful in-depth insights into complex systems. This and other forms of qualitative analysis can illuminate the context and the diversity that enrich learning and that may not otherwise emerge.

It must be understood, however, that these types of evidence have intrinsic specificity to a place, time, or set of conditions and their typically unique construction limits their application as learning tools because it is difficult to draw global comparisons or even conclusions beyond the localized context where a particular case study is applied.

COSA believes that a good impact assessment effectively combines tested quantitative methods and standardized indicators with the insight of various qualitative methods. COSA also combines multi-stakeholder workshops to initially help focus research and then again to discuss findings at the end. These ensure that important contextual factors are understood and that the findings are validated by local experience.

The Value of Impact Pathways

Many projects or investments simply measure the interventions i.e. land certified or farmers trained but these are only part of the pathway to a potential impact. Impacts can take many years to evolve and manifest, sometimes making them difficult to follow and measure. In the meantime, interventions and investments continue and require ongoing direction and decision making. Understanding the logical and likely pathways toward a desired sustainability impact is a basis for successful adaptive management. COSA, as a group of partnerships, strives to identify the *Impact Pathways* that are most likely to lead to a sustainable result by collaborating with key stakeholders and diverse experts in the field and by having other indicators to look at (not just those of a particular theory of change). This helps us to understand and to explain the likely impact pathways in the event that impacts are not exactly as hypothesized. Impact Pathways thus allow managers and stakeholders to respond to emerging needs or opportunities in a timely manner.

Other Approaches to Assessing Sustainability

There are different ways to understand sustainability, ranging from simple self-assessments to independent impact assessments. Each has some merit and any choice essentially represents a compromise between, on one hand, the accuracy or credibility of the information and, on the other hand, the level of cost or effort that is required. The choices are by no means mutually exclusive and the optimal approach often integrates a mix of speedy and low-cost information gathering with more rigorous understanding of impacts and their pathways for action. See "*Common Approaches to Understanding Sustainability"* for a succinct outline of the core differences between the most common approaches.[4]

[3] Howard White (2010) "A Contribution to Current Debates in Impact Evaluation." *Evaluation*. 16(2) 153–164

[4] The COSA Measuring Sustainability Report: Cocoa and Coffee in 12 Countries. Annex v. Philadelphia, PA: The Committee on Sustainability Assessment. http://thecosa.org/communications/our-publications/

Our experience suggests that a tiered approach is the most effective. We pair low-cost Performance Monitoring with the occasional application of rigorous Impact Assessment as needed in targeted areas. The Performance Monitoring can occur alone but is most effective when it uses related but much simpler indicators so it can link directly to COSA impact assessment tools for a deeper understanding. This pairing offers the necessary day-to-day management reporting as well as the occasional audits or Impact Assessment (if desired) to improve accuracy and reliability for more credible reporting.

Using data for good

COSA and its Partner Institutions conduct high quality research using comparable indicators and metrics so that the accumulation and sharing of data can facilitate joint learning. Organizations that adopt COSA indicators and a minimum of good methods to collect the data can readily make project-to-project or cross-country comparisons. Most importantly they can reliably track year to year change and impact that is not possible to assess with typical evaluations.

Reporting is dependable and more credible when the measurement of interventions uses appropriate and consistently standardized instruments. This generates unique value for both stakeholders and shareholders, particularly when those instruments are globally vetted and validated in their alignment with all major international accords and multi-lateral agreements that can apply to agriculture.

Along with our UN Partner agencies, we are developing a dissemination platform to assist those who want to have a better access to the COSA Indicator data. The primary vehicle will be a searchable database that will be integrated into the UN-WTO International Trade Centre's global information systems. The indicators will provide averaged outcomes for different countries, crops, and types of VSS and all the information will be securely scrubbed of specific identifying characteristics.