

INFORMATION BRIEF ON

THE COSA PROJECT

A MULTI-CRITERIA COST-BENEFIT
ANALYSIS OF SUSTAINABLE
PRACTICES IN COFFEE

**A PROJECT OF THE SUSTAINABLE COFFEE PARTNERSHIP, A GLOBAL CONSORTIUM
OF 20 INSTITUTIONS PROMOTING THE SUSTAINABILITY OF THE COFFEE SECTOR**



PHOTO: HENRY HUECK

Objective

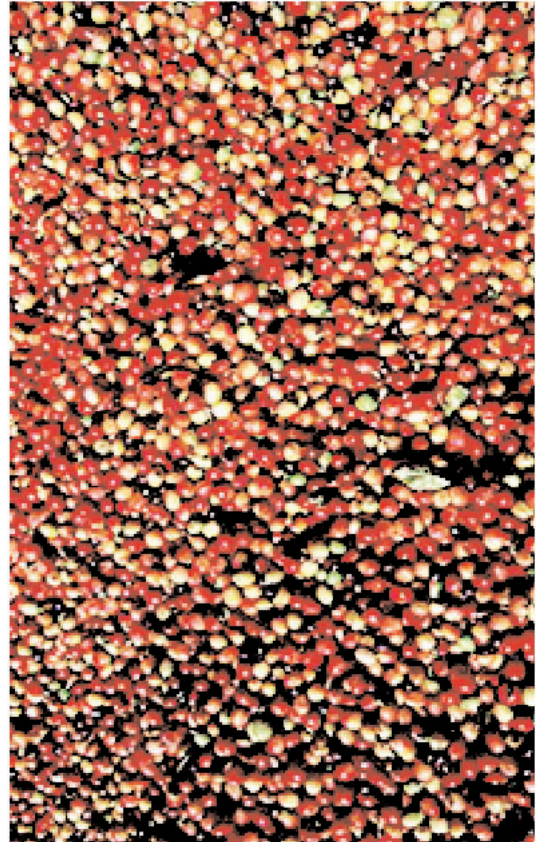
THE COSA (Committee on Sustainability Assessment) project sets forth a program for building information and management capacity in the adoption of sustainable practices in the coffee sector at the global level. As a partnership between leading research institutions in consuming and producing countries, the COSA project aims to develop a rigorous assessment tool and to train producers and other stakeholders to measure and understand the costs and benefits of undertaking sustainable practices and adopting different sustainability initiatives.

Why Measure?

THERE is considerable growth in the number and the importance of sustainability initiatives in agriculture—especially in the coffee sector. These range from long-standing NGO- and civil-society-led standards, such as Organic and Fair Trade, to a number of more recent industry-led standards such as those of Nespresso and Starbucks C.A.F.E. Practices. This has given rise to new prospects for the promotion of sustainable production and new trading practices in supply chains. It also raises new and important questions for producers regarding the costs and benefits associated with “sustainable” practices. To date, there is considerable rhetoric and yet very little information on the broad range of actual costs and benefits of compliance with any sustainability initiative. Where information is available, it is usually partial and often partisan. There are few efforts to apply any rigorous measures and assess larger trends in the marketplace.

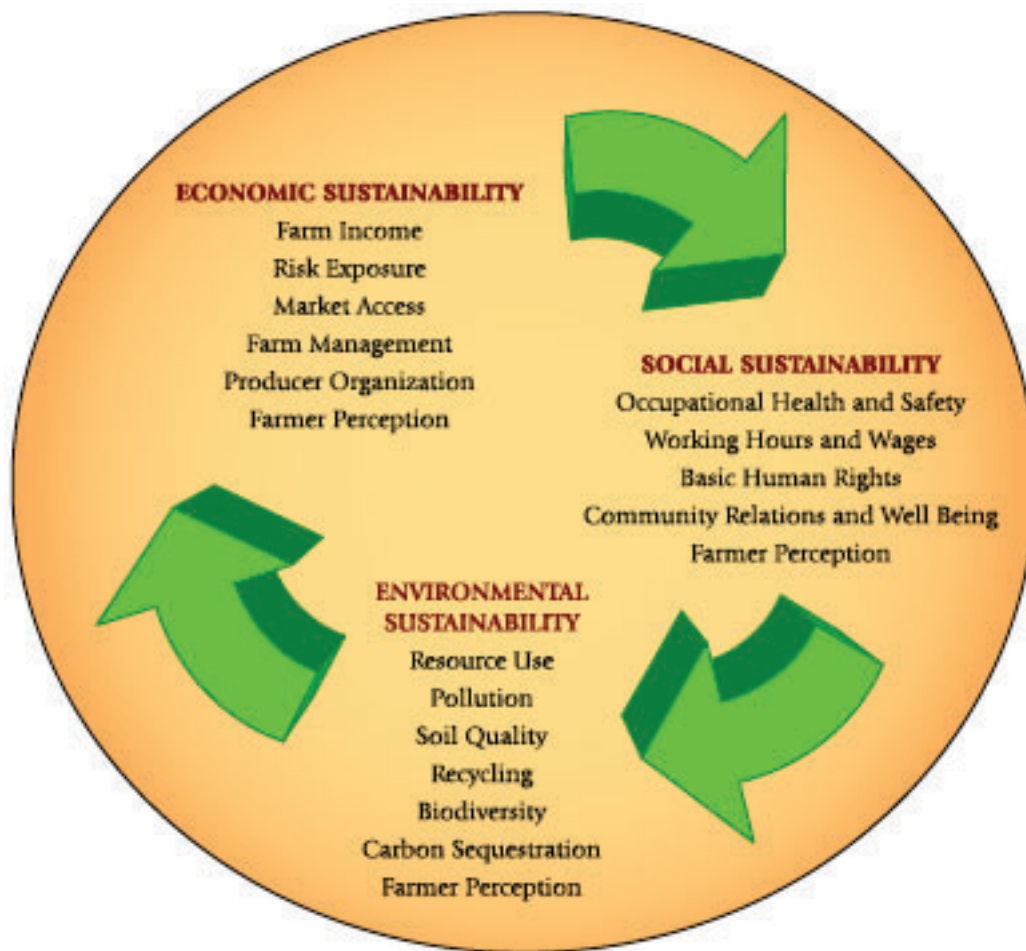
As a result, farmers—as well as consumers, policy-makers and companies—lack objective information on what it really means to become compliant with social, economic and environmental sustainability initiatives. Many millions depend upon coffee production for their livelihoods and need practical tools that enable them to better manage their farms by directly assessing the costs and benefits of adopting prescribed “sustainable” practices.

Recognizing this need, the Sustainable Coffee Partnership (SCP),¹ under its Committee on Sustainability Assessment (COSA), has launched a Cost-benefit Analysis of Sustainable Practices in Coffee. The COSA project seeks to generate science-based information on the social, economic and environmental impacts of the main coffee sustainability initiatives operating in the coffee sector.²



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- 1 The Sustainable Coffee Partnership is an international multi-stakeholder platform for cooperation in the promotion of sustainability in the coffee sector. The SCP is facilitated by the International Institute for Sustainable Development (IISD) and the United Nations Conference on Trade and Development (UNCTAD) under the Sustainable Commodity Initiative.
 - 2 The main initiatives include: Organic; Fair Trade; Rainforest Alliance; Utz Kapeh; Starbucks C.A.F.E. Practices; and the Common Code for the Coffee Community, among others.

THE CIRCLE OF SUSTAINABILITY FOR THE FARMER



The primary goal is to provide a tool with which farmers and policy-makers can make rational choices about sustainability based on their own particular local conditions and needs. COSA facilitates this by enabling them to accurately calculate their own relative costs and benefits of becoming involved in any sustainability initiative.

Although the project expects to provide the most rigorous and up-to-date information on the sustainability initiatives in the sector it does not endeavour to rank the effectiveness of the respective programs. Where appropriate, it develops country-specific policy briefs aimed at aiding countries to more cost-effectively implement sustainable practices, in accordance with regional specificities.

CORE ACTIVITIES OF THE COSA PROJECT

- Development of a rigorous cost-benefit methodology
- Application of the methodology to 500+ farms across a number of coffee-producing countries
- Development of a practical business or decision-making tool for use by farmer groups and extensionists
- Training of farmers and extensionists in basic farm management and cost-benefit assessment
- Facilitation of policy development based on country or regional findings

COSA Beneficiaries

The COSA project benefits four stakeholder groups:

- Producers** require concrete and locally relevant information on the expected financial and time investments required. COSA provides producers with information, training and specific tools to both select and manage any sustainable practices they choose. Producers need specific help to:
 - gain a better understanding of the financial and other risks associated with coffee production and entry into sustainable markets;
 - gather and monitor data on the social, economic and environmental impacts; and
 - manage implementation of sustainable practices in the most cost-effective manner.
- Traders, manufacturers and retailers** have a direct interest in maintaining the stability, quality and good management of their supply base. Fundamentally, the COSA tool contributes information to improve farm management and investment choices that make producers and chains more sustainable. The COSA project also serves industry players by providing a real-time indication of production trends, challenges and opportunities related to the adoption of sustainable practices.
- Policy-makers** need clear and objective information on how different sustainable practices impact producers and their communities. COSA provides an independent and objective platform for collecting such information. COSA's multi-criteria analysis is adaptable and allows different policy-makers to apply COSA data to different assessment frameworks based on their diverse needs or policy priorities.
- Standards bodies** need to ensure the ultimate impacts of the criteria and systems they employ to meet their goals. COSA outputs will help them by providing a realistic and objective scientific basis for measuring such impacts. They also benefit from saving considerable time and expense to develop a proprietary set of credible metrics.

HOW PRODUCERS CAN USE COSA

- **Diagnostic tool:** Evaluate farm practices based on international sustainability standards
- **Didactic tool:** Learn what the implementation of sustainable practices would mean at the field level
- **Business decision-making tool:** Assess changes necessary to be compliant with leading sustainability systems and develop an implementation plan to prioritize activities and maximize benefits
- **Monitoring and evaluation tool:** Using the tool over time, sustainability progress can be assessed and returns on investments or cost/benefit-ratio evaluated
- **Negotiating tool:** Better understanding the real costs and benefits of adopting sustainable practices enables producers to negotiate more realistically

The COSA Approach: How it Works

CONVENTIONAL approaches to cost-benefit analysis are typically economic or defined by their use of valuation instruments that convert to monetary or economic equivalents. In some cases the COSA methodology can build on accepted innovations in valuing environmental or social services via economic measurement—but it intends to go further. While such analysis is useful for getting comparable results along a single scale, monetary valuation is insufficient—and, in some cases, even inappropriate, in the assessment of the overall sustainability impacts due to the difficulty of valuing social and environmental attributes in this manner.

Although the COSA project aims to provide the most accurate measure of the economic inputs and outputs associated with participation in recognized sustainability initiatives, it also applies a “multi-criteria analysis” approach in the measurement and treatment of social, economic and environmental data.



PHOTO: JEAN RAPHEAL DANTIN

Multi-criteria analysis consists of measuring and reporting impacts based on a number of distinct variables rather than a single (e.g., monetary) value. The multi-criteria approach is particularly suited to the philosophy underlying the COSA research, which recognizes the diversity in the sector and ultimately intends to leave final decisions and evaluations to the relevant decision-makers themselves, rather than provide a rigid or “one-size-fits-all” evaluation.

Through an extensive literature review; an international consultative process drawing from more than 50 experts and representatives in the coffee and sustainable development sectors; and field testing in five countries, the COSA project has identified a preliminary set of key criteria deemed to be of fundamental importance in assessing the costs and benefits of specified practices/initiatives from a sustainability perspective. These macro areas form the basis of COSA’s multi-criteria analysis.

Farm-level Performance: COSA Multi-criteria Analysis



Example Output from COSA Multi-criteria Analysis

In applying the multi-criteria analysis approach, COSA:

- assesses compliance costs and benefits as both the direct (i.e., costs of documentation, verification or certification) and indirect costs and benefits (i.e., the costs of learning);
- captures both tangible and “intangible” benefits associated with sustainable practices;
- illustrates the differences experienced in different ecosystems, geographic regions of the world, and even larger plantations and small farmers;
- limits measurements primarily to the farm, with a secondary focus on the supply chain, producer organizations, community and market; and
- is conducted initially over three years to determine real changes in comparison to control groups.

On the basis of COSA’s multi-criteria analysis, a wide range of end-users can apply their specific value framework to reach locally relevant conclusions in the application of sustainable practices. COSA’s multi-criteria analysis and corresponding data set are designed to serve, to the degree possible, a wide variety of other analytic systems including: Relevance Tree Analysis; Cross Impact Analysis; Lifecycle Analysis; Emery Analysis; and Ecological Footprinting.

Finally, although the COSA project is specifically focused on the coffee sector, it is being structured to fill a need for similar information and tools in a variety of agricultural products where market access is increasingly being conditioned on compliance with specific social and environmental requirements.



PHOTO: CHRIS WUNDERLICH

ADDRESSING RISK

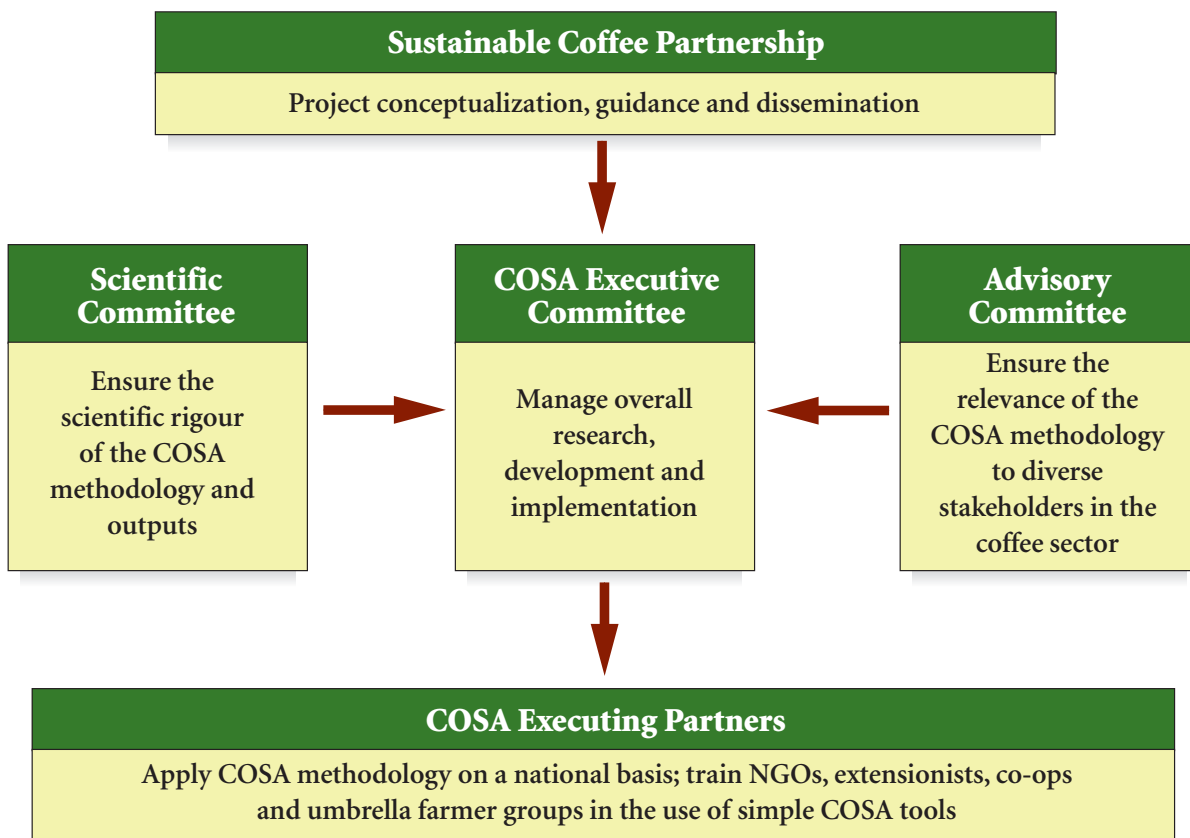
Risk	Risk-mitigating Strategy
Tool may not effectively reach producers at the field level	<ul style="list-style-type: none"> • COSA must be simple enough to understand. • Local partners are integrated in development and implementation to ensure ongoing support beyond the program. • Producer organizations, national coffee institutions, exporters and NGOs are important as trainers.
Producers and policy-makers will not accept or use the results of COSA	<ul style="list-style-type: none"> • Global policy community already involved since inception, multi-nation support. • Both Executive Board and International Coffee Organization (ICO) Council unanimously endorse COSA. • International Scientific Committee helps ensure credibility and relevance.
Producers may not know what to do with COSA information and tools	<ul style="list-style-type: none"> • Training is a core part of Phase I. • Further activities to help producers determine cost-effective sustainable practice in Phase II.

The COSA Management Team

THE COSA project is managed and implemented by the Sustainable Coffee Partnership's Committee on Sustainability Assessment, which consists of the International Institute for Sustainable Development (IISD); Centre de Cooperation Internationale en Recherche Agronomique pour le Developpement (CIRAD); INCAE – Centro de Inteligencia sobre los Mercados Sostenibles (CIMS); and Centro Agronómico Tropical de Investigación y Enseñanza (CATIE).

In recognition of the sensitivity of the subject matter, the project organizers have established a number of “feedback loops,” including a 50+ member Advisory Panel of key stakeholders, a number of producer representatives and a Scientific Committee in order to ensure that the project maintains both stakeholder relevance and scientific rigour in its development and implementation. The work is open to comments and suggestions from all sources and is unanimously endorsed by the International Coffee Organization.

COSA Project Oversight and Management



For the latest or more detailed information on the COSA project, visit the Sustainable Commodity Initiative Web site at: <http://www.iisd.org/standards/cosa.asp>

Draft Themes for Measurement

COSA partners test the criteria in the field with input from stakeholders and producers. We recognize the need for simplicity in order to facilitate the application of this information tool across the widest possible range of regions and growing conditions. With this in mind we have continuously refined a list of “key indicators” that correspond to the macro criteria.

No practical field measure can test every variable that contributes to sustainability. Yet the COSA methodology has distilled key indicators that correspond to the recognized best practices among the major initiatives, international bodies and sectoral experts. These key indicators are supported by a “field guide” that specifies a list of direct questions and sampling techniques.

We also recognize that a number of the indicators may not always be fully answerable, especially by smaller producers. For this reason, and to ensure accuracy, the field guide is initially being implemented by professional auditors from the region and a local extension agent with support from national institutions and coffee bodies.

In the interests of conceptual simplicity, this document does not include the full list of specific questions, field instructions for data gathering or the software-analysis package. Below are the core components of the draft macro criteria and key indicators.



PHOTO: HENRY HUECK

Economic Issues

Farm Income	
Productive Efficiency	Annual green coffee yield on the farm
	Total annual labour costs on the farm
	Total annual planting costs on the farm
	Total annual irrigation costs on the farm
	Total annual fertilization costs on the farm
	Total annual cost of pesticides, herbicides and other controlling substances on the farm
	Total annual cost of field maintenance on the farm
Post-harvest	Total annual harvesting costs
	Total annual processing costs
	Total annual marketing costs
Quality	Change in coffee quality (defects, bean size and cupping) over the last year
Price Received	Average price and price differential received for coffee
Risk	
Volatility	Impact on yield
	Effect on price stability from association with a sustainability program
Financing	Change in access to credit
Diversification	Level of dependence of overall family income on coffee production
	Diversification of farming strategies and practices as a direct result of undertaking a sustainability initiative
Market Access	
Relationship and Transparency	Effect on price stability through association with a sustainability program
	Effect on farmer's access to market intelligence through association with a sustainability program
	Percentage of total coffee produced sold at a premium
	Improved commercial relationship and/or negotiation position

continued on next page

Economic Issues (*continued*)

Farm Management	
Efficiency and Administration	Total annual learning costs
	Total cost of performing internal quality control
	Direct verification and certification costs
	Total cost of fixed investments
	Additional management, monitoring and administrative costs
Producer Organization	
Management Services and Support Activities	Total costs of farmer and staff training
	Total costs of performing internal quality control (record keeping and traceability)
	Total costs of administering implementation and monitoring plans associated with sustainability programs
	Total marketing costs
	Perceived satisfaction of farmers with the sustainability program
	Total cost of fixed investments necessary to become a participant in the sustainability program
	Direct verification and certification costs for the past year
	Change in quality (defects, bean size and cupping) since the adoption of sustainability program
Farmer Perception	
Costs and Benefits	What was the impact on the farm's economic sustainability as a result of adopting sustainable practices?
	What was the impact on the farm's management system?

Environmental Issues

Resource Use	
Energy Use	Total amount of electricity, fuel and wood used for processing, production and irrigation
Water Use	Existence and functionality of water conservation system
	Total amount of water used on the farm
Land Use	Quality of the forest coverage on the farm
	Documented environmental management system for the farm
Pollution	
Biocide Use	Amount and classification of biocides used
Fertilizers	Amount and type of fertilizer used
Water	Water treatment system in place on the farm
	Water contamination controls
Soil Quality	
Soil Management	Evidence of soil erosion on the farm
	Evidence of soil coverage
Recycling, Re-use and Waste Management	
Recycling and Re-use	Type and quality of waste recycling on the farm
Biodiversity	
Habitat	Density of tree coverage on the farm
	Diversity of tree coverage on the farm
Carbon Sequestration	
Carbon Capture	Tree density on the farm
Carbon Release	Total amount of energy use for the farm
Farmer Perception	
Environmental Values	From the farmer's perspective, does the sustainability initiative you have adopted effectively address the most important environmental issues for your farm?

Social Issues

Health and Safety	
Policy	Farm policy on occupational health and safety
	Labourers and staff familiarity with farm health and safety policies
Access to Medical Services	Distance to closest medical facility
	Affordability of available medical services
	State of first aid equipment on the farm premises
Handling of Chemicals	Safety of chemical handling
	Adequacy of protective equipment
Potable Water	Accessibility of potable water
Living Conditions	Hygiene of living conditions of the producers/workers
Working Hours, Wages and Training	
Wages	Compliance with national minimum wage laws
	Wage rates on farm as compared to local wage rates
Education and Training	Accessibility of education from the farm
	Accessibility of training on the farm
Basic Rights of Employees	
Labour Contracts	Transparency of employee relations
Worker Discrimination	Evidence of discrimination/non-discrimination among workers
Right to Organize	Evidence of freedom of association
Protection from Risky Activities	Application of toxic agro-chemicals by children
	Evidence that adequate protective equipment is used by employees
Child Labour	Access to education for children
	Children protected from dangerous activities

Community Relations and Well-being

Impacts of Sustainability Programs on the Community	Transparent and democratic organizational processes
	Evidence of increased management capacity at the co-op or community level
	Evidence of strengthened community governance from participation in a program

Farmer Perception

Values	After embarking on sustainable methods, what do you now perceive are the most important values of this approach for you?
	List 3–5 main topics or questions which you would like more information on with respect to the impacts of sustainability initiatives
Well-being	Rate how you estimate your life (and that of your family) is heading as a result of the standard on your farm
	Estimate the general state of health of the farmer and his/her family compared to prior year
Expectations	Why did you initially elect to adopt a sustainability standard?
	Rate your overall satisfaction with the outcome of the standard on your farm
	Rank what were the main problems you encountered in the process of adopting sustainable methods
	Do you plan to continue with the initiative over the next couple of years?

The COSA team would like to thank the following institutions for their direct support:



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