GREEN economy and TRADE

A Guide for the Assessment of the Costs and Benefits of Sustainability Certification

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List of Acronyms and Abbreviations

ACC	Aquaculture Certification Council
ASC	Aquaculture Stewardship Council
ATFS	American Tree Farm System
BAP	Best Aquaculture Practices
CBA	Cost-Benefit Analysis
CDC	UK's Development Finance Institution
CEA	Cost-Effectiveness Analysis
FMO	Nederlandse Financierings-Maatschappij voor Ontwikkelingslanden N.V. (Netherlands Development Finance Company)
FoS	Friend of the Sea Criteria
FSC	Forest Stewardship Council
GAA	Global Aquaculture Alliance
GE-TOP	Green Economy and Trade Opportunities Project
HACCP	Hazard analysis and Critical Control Points
IFOAM	Organic Standard
MCA	Multi-Criteria Analysis
NPV	Net Present Value
OECD	Organization of Economic Co-operation and Development
PEFC	Pan-European Forest Certification Council
SFI	Sustainable Forest Initiative
TEEB	The Economics of Ecosystems and Biodiversity
TEV	Total Economic Value
WWF	World Wide Fund for Nature

1. Introduction

Background

A variety of sustainability standards have been developed in recent years, with the aim to improve the environmental quality, social inclusiveness and economic performance of production and trade. This wave has been motivated by an increased awareness of consumers around the world about the impacts of their purchasing decisions, with certification being a key signalling mechanism for consumers that want to buy more responsibly. Driven by this demand and increased awareness, producers and other actors in the value chain are increasingly choosing to adopt standards that verify and certify the compliance with sustainability criteria. These standards have spread across many industries, including forestry, agriculture, and fisheries & aquaculture (See *Table 2* for a detailed list of standards in each sector).

Sustainability certification is intrinsically linked with trade. The majority of production of certified goods originates from outside of the countries where their final consumers are located. Trade can amplify the impacts of production of certain products, as producers have access to the vast demand emanating from consumers around the world. This demand can generate social inequality, and poor and unsafe working and environmental conditions. Nevertheless, with the help of sustainability standards, trade has an enormous potential to increase the wages of producers through the price premiums that some certified products command, but can also be an engine to promote better social and environmental performance.

Certification can also serve as an important means of implementation for the Green Economy. Firstly, it provides a mechanism to internalize the environmental and social costs of production. Secondly, it provides producers with an incentive to improve their social and environmental track record all while providing economic incentives in the form of increased market access and price premiums. Thirdly, it informs consumers and provides them with options to consume more responsibly. This guide complements the standards work conducted by UNEP under its **Green Economy Trade Opportunities Project (GE-TOP)**, in Vietnam, Peru, Chile, and South Africa.

Rationale

While sustainability standards are drawing increasing attention from producers and consumers, a coherent methodological framework for the analysis of the full social, environmental, and economic costs and benefits related to sustainability standards is still missing. This is partly due to the difficulty of quantifying the benefits and costs of environmental and social aspects, including ecosystem services, with the added complexity of differentiating between private and public costs and benefits. The adoption of an integrated framework for measuring the economic, social and environmental 'profitability' of sustainable businesses (and hence of sustainability certification) is crucial to adequately inform the strategic decisions of producers and policy makers, both on investment decisions and on policy formulation and evaluation.

Starting from these considerations, this study seeks to provide guidance on how to approach an assessment of the broader costs and benefits deriving from sustainability certification. In contrast to traditional Cost-Benefit-Analyses, this methodology is addressed to researchers, policymakers and practitioners who want to explore the economic implications of the use of sustainability standards and complement these with environmental and social implications of sustainability certification for both the public and the private sector. Based on this more comprehensive analysis, relevant stakeholders should be able to strategically choose those policies, practices and strategies which deliver the highest overall societal and environmental benefits.

Objectives

Since the specifics of the CBA vary greatly depending on each particular case, the industry, and the focus of the analysis, this paper has the objective to provide a general introduction to the CBA methodology and to provide a toolkit that can be adapted to a wide array of different cases. This study is not intended to provide a full-fledged technical guide on the actual implementation of a CBA, but rather, to provide a diverse set of tools that can be adapted to the specific focus of the question the user is trying to answer. It will guide the user through the most relevant steps of the analysis, and provide further resources to deepen the technical knowledge to implement a CBA. Thus, the specific objectives of this guide are to:

- Understand the fundamentals of a Cost-Benefit-Analysis (CBA).
- Integrate environmental and social impacts into the CBA methodology.
- Provide a clear step-by-step guide on how to conduct a CBA.
- Understand how a CBA can help draw conclusions on the use of sustainability certification.

2. Cost-Benefit Analysis

Different Methodologies

A cost-benefit analysis (CBA) is a systematic process for calculating and comparing benefits and costs of a given decision, and it is based on assigning a monetary value to all the activities performed (either as input or output). Given a set of options, a project should be undertaken if the expected benefit is higher than the expected costs of the project. Different CBA techniques are commonly used to evaluate the feasibility and profitability of business strategies and projects, as well as (in some cases) public policy interventions. These techniques generally compare the total investment required for the implementation of the strategy/project against its potential returns. Commonly, CBA techniques focus on economic aspects, leaving social and environmental aside, particularly when they cannot be assigned clear monetary values.

The following are amongst the most common CBA techniques utilized:

- The **payback period** is the most basic of all cost-benefit analysis techniques. First, all costs associated with a specific strategy/project are quantified and aggregated. In particular, costs might include investment in fixed assets, labour and training costs, as well as the time lost for training or implementation. The total aggregated costs are then divided by the expected financial returns deriving from the implementation of the strategy/project. The result obtained corresponds to the indicative time needed for the investment to pay for itself. It does not, however, inform about the overall benefit of a project.[1]

- The **rate of return** technique is generally used to assess single or small investments. The formula consists of subtracting the total costs associated with the investment from the expected added benefits, and then to divide the obtained value by the investment's costs. The value obtained at the end of the analytical process is the percentage return on investment, which gives an idea of the profitability of the proposed strategy/project. However, caution needs to be used when applying this technique as it can be misleading.[2]• The **net present value (NPV)** analysis follows the same procedure as the payback period technique for the calculation of total costs and benefits associated with strategy/project implementation. In addition, the cost of capital associated with outside funds needed to start the strategy/project is estimated. Based on the comparison between present and estimated future value of financial costs and benefits (including estimation of future inflation trends), the net present value of a given strategy/project is calculated. If the final result is a negative value, the project is generally not considered as worthwhile, and thus rejected. Projects with a higher NPV will be preferred over projects with a lower NPV. The NPV rule requires, however, a discount rule to be applied to future benefits and costs.[3]

[1] For more information on the payback method is available here.

[2] For more information on the rate of return technique, see ***"Cost-Benefit Analysis and the Environment", OECD, 2006***. An Executive Summary can be accessed here.

[3] For more information on the NPV analysis, go here.

Companies and policymakers may also use alternative techniques to assess the viability of investments, among them cost-effectiveness analysis (CEA) and multi-criteria analysis (MCA). A CEA is a form of economic analysis that compares relative costs and outcomes (effects) of two or more courses of action. It is broader than a CBA and includes the analysis of non-monetary impacts, evaluated qualitatively, or ranked, for instance, on a scale from 1 to 5. An MCA is a decision-making process that allows the assessment of different options against a variety of criteria, including quantitative and qualitative indicators. In contrast to CBAs and CEAs, MCAs can be conducted in cases where multiple objectives and criteria exist.

Monetization of Environmental and Social Factors

Improvements in the state of the environment or in social welfare should be measured in monetary terms to the extent possible, in order to surpass the shortcomings of traditional CBAs, which focus exclusively on economic costs and benefits and do not take into account the social and environmental dimensions. Nevertheless, the precise identification and monetization of these aspects may pose several challenges.

Firstly, the impacts of sustainability certification largely depend on the specific context and sector of production. Consequently, the choice of indicators should be carefully customized on a **case-by-case basis**. Another key challenge for the valuation of social and environmental costs is the **limited amount of data** available with regard to the environmental and social consequences of unsustainable production and trade. Finally, the **different perspectives on environmental and social avoided costs** of sustainability certification should be taken into account.

For example, forest ecosystem deterioration resulting from unsustainable timber production might generate high costs for local communities that are highly reliant on forest goods and services. On the other hand, timber production companies might give less priority to such costs in the short term, and only perceive them as relevant in the medium and long-term, when environmental degradation would have a strong impact on the profitability of their business.

As indicated by WWF (2013) perhaps the clearest and most useful way to trace the relationships between ecosystem services, economic values and human well-being outcomes is to **combine two frameworks**. The first is **total economic value (TEV),** which is commonly applied by economists. The second is the **ecosystem services/human well-being framework** presented in the Millennium Ecosystem Assessment (MA, 2005), which is widely used by conservation planners and decision-makers. This framework has been adopted by The Economics of Ecosystems and Biodiversity (TEEB), a global initiative that sets out the case for natural