



Full Cost Accounting to Transform Agriculture and Food Systems

A guideline for the organic movement,
developed in collaboration with the Sustainable Organic Agriculture Action Network
(SOAAN)¹. Published February 2019

We use nature because it is valuable, but we lose it because it is free

– Pavan Sukhdev, President of WWF International & former Study Leader of TEEB²

Foreword

This document explains how the organic sector can contribute to and make use of Full Cost Accounting³ (FCA), using it as a lens and methodology for shaping agriculture and food systems toward sustainability. The document outlines how we can use FCA to monitor and improve the performance of organic systems, substantiate our messages on the benefits of organic agriculture to consumers and advocate for policies that promote truly sustainable agriculture and food systems. The context here is production and consumption stemming from agriculture, although we acknowledge that agriculture touches other systems, and that implementing changes in agriculture-based systems through full cost accounting entails changes outside the boundaries of systems in agriculture.

The Need for Change

Globally, agriculture is now responsible for causing more environmental harm than good: We are losing biodiversity and productivity. We are causing climate change and freshwater shortages. We are polluting water, soil and air. Society's food systems are falling short of meeting dietary needs. Many people are hungry or suffer from malnutrition. More people are suffering from non-communicable diseases like cancer and diabetes; and farmers and workers in the food sector are among the poorest in societies all over the globe.

Simply put, it is currently financially more advantageous to harm the environment, exploit people and negatively affect their health, than it is to protect and enhance our natural resources, and strive for the well-being of our society. The negative effects of our current agriculture and food systems, both on people and the environment, are not sufficiently taken into consideration in farming, processing, trade and consumption. Treated as 'externalities', the costs of mitigating these negative impacts is left for society to carry. The health, societal and environmental burden related to food and agriculture are enormous. So, if we want to see real change in the world and move towards true sustainability, we must be able to see the real cost – eventually reflected in the price – and take full responsibility for our actions. We need to change how we treat the environment and use natural resources, and how we interact with each other when it comes to food and agriculture.

¹ www.ifoam.bio/en/node/497

² The Economics of Ecosystems and Biodiversity

³ Terminology varies, calling the topic true cost accounting, full cost accounting, true value and fair pricing, and others. For the purposes of this paper we use the term Full Cost Accounting.



The global community achieved consensus for its vision for a more sustainable world through the articulation of the Sustainable Development Goals (SDGs). They are widely considered to reflect the societal transformation we need to make all spheres of our lives truly sustainable. The SDGs are not linear or a list of priorities - rather, all elements are interdependent and synergistic. It is thus ensured that they live on, beyond the achievement of individual goals.

If we ignore certain challenges in an attempt to minimize our efforts, we may unwittingly be diverging from, or even undermining, these goals.

Agriculture and food touch on every one of the SDGs (Figure 1). Out of all human activities food production is the activity most relevant to our survival, providing a source of livelihood to almost two billion people. Yet, it also massively influences the inhabitable land area, ecosystems, natural resources and climate change. A seemingly small tweak in our perception of how we value agricultural practices and goods, has the potential to effectively change humanity's course for the better.

Mechanisms that minimize the negative impacts of agriculture and food systems while maximizing their benefits will help speed up the societal changes required to move toward the SDGs.

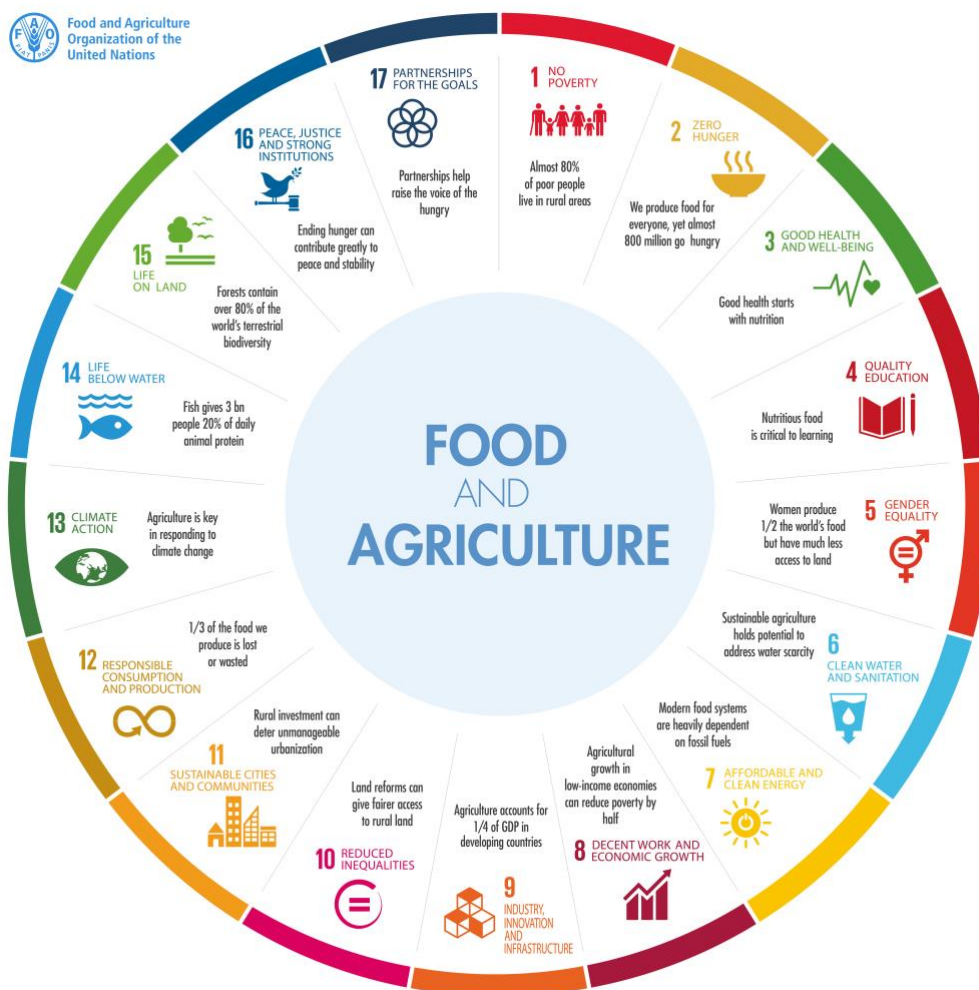


Figure 1: The role of food and agriculture for the SDGs (Source: FAO)



How does Full Cost Accounting work?

Full Cost Accounting is an approach that assesses the environmental, social and economic costs and benefits of food production and makes these costs and benefits 'visible' so that decision-making processes can take them into account. Full Cost Accounting compares the impacts of human action at levels that are typically perceived as abstract and hard to compare, by translating them into financial impact: Money becomes the quantifiable common denominator for the cost of human action.

In our agriculture and food systems, policies do not incentivize the generation of 'public goods' (e.g. healthy environment, healthy people etc.). Inversely, they also do not disincentivize harmful practices (Figure 2). As a result, farmers and food businesses can ignore these 'external' effects.

In reality consumers pay three times or even four times for seemingly cheap food. In some countries citizens 'subsidize' unsustainable agriculture e.g. through government schemes that promote synthetic fertilizers. Then, they also pay the price of the product, and in addition they finance, through tax payments, the mitigation of the negative impacts of production (e.g. for purifying drinking water) and finally bear the health costs of non-commutable diseases. Full Cost Accounting can help highlight these 'hidden costs' by making them visible. Moreover, the societal benefits of more sustainable systems like organic farming would become more apparent.

Full Cost Accounting highlights the fact that we do not just need to 'feed the world', but that we need to do so in a truly sustainable way. Full Cost Accounting can also provide tools to ensure that sustainability in agriculture and food systems can be continuously improved. Most importantly, however, Full Cost Accounting provides strong (economic) arguments for policy reforms that do incentivize beneficial practices and systems - and disincentivize harmful ones.

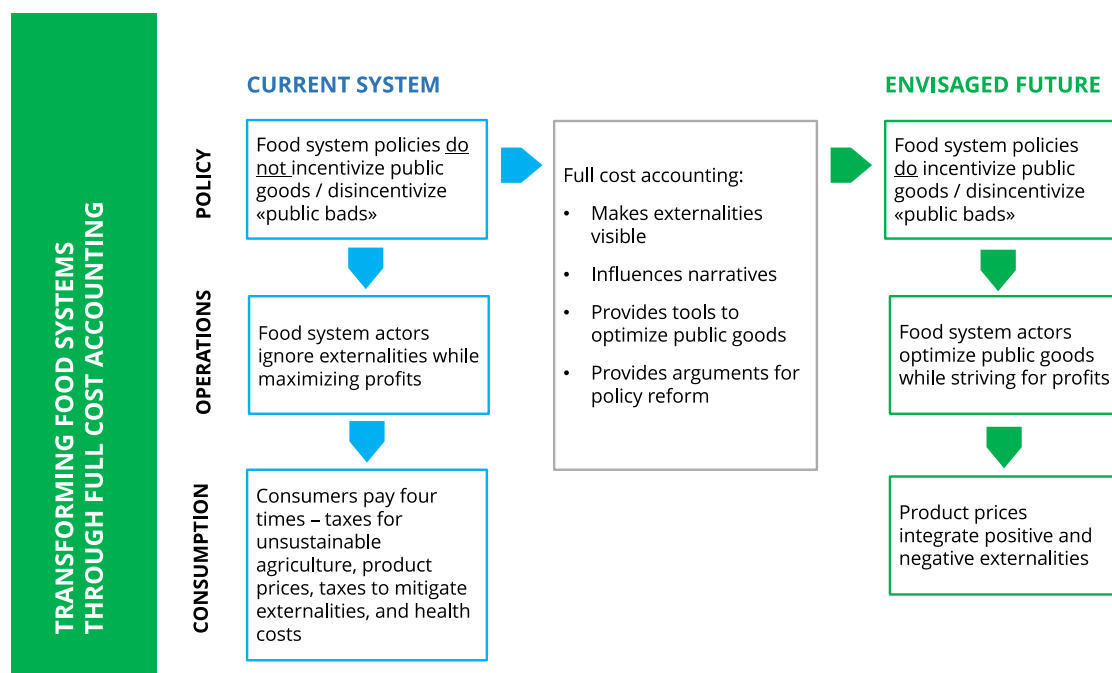


Figure 2: The Theory of Change of Full Cost Accounting



Some people consider it unethical to value everything in monetary terms. In the organic sector, we recognize that the currency of nature is life itself and that many phenomena cannot be expressed through money alone. The value of biodiversity, for example, is more than the value of its ecosystem services, and the value of animal rights and welfare is more than the costs of installing management practices that promote animal health.

Money, however, is universally understood as a way to assign value in societies across the world, it is a 'language' that politicians, businesses and consumers alike understand. Financial incentives and disincentives are powerful ways to influence what people and businesses do and how they do it. Notwithstanding its limitations in accurately reflecting societal costs and benefits, Full Cost Accounting is an important tool for change and offers an alternative to our current, predominantly profit-centric model.

What to Measure, How to Measure

Full Cost Accounting can serve as a yardstick for all agriculture-based production and consumption systems, from primary production to final consumption, including waste streams and the recycling of materials.

Environmental as well as human costs and benefits add up as products move through the value chain, through to the end consumer. For instance, the overall impact of processed food depends on the environmental impacts of the production of its raw ingredients, the transformation processes these ingredients undergo, as well as the distribution of the final product, including packaging, transportation, storage, etc.

The results and impacts of any given practice - or system - can be evaluated based on its costs and benefits, and can be rewarded or discouraged accordingly. Full Cost Accounting can be applied to specific segments of the value chain and/or the whole agriculture-based sector. It can pinpoint improvement needs in agriculture and food systems.

When it comes to agriculture-based production-consumption cycles, the Sustainable Development Goals can be explained rather simply: We want healthy ecosystems, healthy food and non-food products to support healthy people, and we want sustainable livelihoods for all who work in the value chain. We can use the agriculture-based outcomes from the SDGs to guide us on developing Full Cost Accounting for food and agriculture systems. For example:

Goals	Key Outcomes
Healthy Ecosystems	Improved soil fertility Improved water quality and quantity Biodiversity stewardship Animal health & welfare Climate change mitigation Reduced use of non-renewable resources Waste reduction (non-recyclable materials)



Healthy Food and Non-food Products for Healthy People	The right quantity of calories in the right quality ⁴ Non-toxic products (i.e. water, food, non-food) Culturally appropriate diets in line with local specificities (e.g. land, climate)
Sustainable Livelihoods	Employment opportunities and decent wages Safe and good working conditions Opportunities for learning and for personal growth

Full Cost Accounting methodologies and tools rely on scientific modeling and data collection. Measurements and values are based on data sets that have been aggregated into default values, which are then adjusted based on additional data. There is a need for more local research and accounting for the gathering and processing of data so that reference values, locally and globally, can become more accurate. We can make this task easier by finding consensus on key performance indicators, metrics and monetization factors, as well as centralizing collaboration via a common platform.

Efforts have been made to create valuation methodologies based, at least in part, on some elements of the SDGs, but different methodologies also rely on different calculation tools to arrive at their respective results. This means that, for the time being, the true, or full cost of any given product, activity, enterprise, sector, production model or system will inevitably only be an approximation, or an incomplete snapshot, limited by a given set of boundaries over a given period of time. Still, although calculations may vary but, importantly, they consistently help identify whether key practices and their impacts move in a positive or a negative direction.

There has been considerable work done to capture the spectrum of actors, outcomes, practices, and metrics in a common, comprehensive, and cohesive framework. TEEB AgriFood⁵ is developing a True or Full Cost Accounting framework that resonates with the organic sector in particular because of its holistic approach. This framework covers a full spectrum of natural and social capitals across the full production-consumption cycle and aims at attaining the SDGs holistically. It works toward improving consistency and accuracy of what and how to measure.

In order to reverse the unsustainable course of agriculture globally, we need to start with incremental changes and continue to add criteria and refine the methodology continuously over time. Changing direction from negative to positive on a select set of linchpin practices can create the critical mass needed to transform human activity to not only become sustainable but also add value by delivering public goods. A focus on specific practices can serve as a powerful initiator of change that will compel other changes in a similar direction, eventually leading to the holistic achievement of the SDGs.

⁴ This links to debate around the futility of defining food (in)security in terms of the quantity of calories consumed, neglecting the importance of nutrition, i.e. the quality of those calories.

⁵ TEEB AgriFood won the Vision Award of the Future Policy Award on best policies to support Agroecology and Sustainable Food Systems in 2018. For more, see the news item: <https://bit.ly/2CooBto>



Transforming Food Systems through Full Cost Accounting

Applying a Full Cost Accounting approach can significantly contribute to transforming agriculture and food systems. The following three main levers are particularly pertinent:

1. Substantiate Communication on the Benefits of Organic Agriculture

Full Cost Accounting has the potential to make more visible the delivery of public goods through organic farming practices. It can demonstrate that organic agriculture generates added value for the common good and, when compared to, even reduces the costs to society that ‘conventional’ agriculture creates through unsustainable production practices. In other words: organic agriculture makes economic sense.

If external costs were reflected in the price, organic products would not be more expensive than conventional ones, they would be cheaper. By the same token, the removal of agricultural subsidies would considerably reduce the price differential between organic and non-organic.

Consumers in turn would see their choice of organic products validated and feel encouraged to continue giving preference to organic.

2. Promote Organic Best Practices

Organic and agroecological best practices⁶ are viable approaches that form the basis of sustainable systems. Many solutions for environmental protection and enhancement that improve human health, and assure livelihoods are already known and could be scaled up further. By promoting the incorporation of Full Cost Accounting metrics (quantitative or qualitative) into organic practices, we facilitate the improvement of the performance and scalable impacts of organic and other sustainable production systems. Focusing on Full Cost Accounting methods and outcome-based payments, beyond a mere compliance with standards, might further allow us to increase the efficiency of organic food systems whilst rewarding producers and incentivizing them to do the right thing.

3. Advocate for Policy and Legal Reforms

Policy reforms should financially reward or penalize practices based on their potentially positive or negative impacts. In the most basic sense, practices with a potential for harm should be taxed (or, where very detrimental, even be made illegal) or discouraged, following the polluters pays principle.⁷ Beneficial practices should be rewarded through subsidies or tax breaks, or even required by law, with corresponding penalties for violation.

An important first step is to align policies with the SDGs and stop subsidies for harmful practices, demanding that public funds be used for public goods. Policy reforms on taxes, subsidies and accounting rules have the power to steer agriculture towards greater sustainability, potentially making organic more profitable for producers and more affordable for consumers. Public procurement policies could be revised to favor suppliers who can demonstrate better performance and/or improvement in accordance with yet to be defined indicators. At the same time, it is important that policies pay attention to the inequality of wealth among consumers, so that all citizens can have equal access to high-quality, nutritious foods.

⁶ www.ifoam.bio/en/organic-landmarks/best-practice-guideline-agriculture-and-value-chains

⁷ https://en.wikipedia.org/wiki/Polluter_pays_principle



Call to Action

IFOAM – Organics International invites the organic movement and all its allies to make use of Full Cost Accounting to accelerate the transformation of agriculture and food systems. The following four action points are of particular importance:

1. Support and encourage studies on Full Cost Accounting and the collection of data from many localities to strengthen the evidence base.
2. Make use of economic (full cost) arguments to influence narratives related to agriculture and food.
3. Strive to continuously improve organic practices and systems so that they deliver public goods.
4. Join forces with allies to advocate for policies conducive to making the full cost of agriculture and food systems visible.