

Environmental, Social, and Economic Impacts of Sustainability Certification in the Agricultural Sector – The Current State of Empirical Research

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Various stakeholders involved with sustainability certification are interested in knowing whether certification really fulfills its promises. Business managers who have to determine what type of products to source, consumers who are concerned about making appropriate buying decisions for themselves and their families, producers who think about obtaining certification, and sustainability standard initiatives that themselves need arguments to support their certification programs.

A recent study conducted by FiBL (Niggli et al 2011) reviewed the current state of empirical research on environmental, social, and economic impacts of sustainability certification in the agricultural sector. One result of the study was that a disproportionate number of research papers are on the impacts of organic standards in comparison to the other labels under investigation (Fairtrade, Sustainable Agriculture Standard certified by the Rainforest Alliance, UTZ Certified, Roundtable on Sustainable Palm Oil, and Roundtable on Responsible Soy).

Table: Number of empirical studies that measure sustainability impacts of four selected certification schemes in the agricultural sector (Studies addressing several standards were counted for each label)

	Organic	Fairtrade	Sustainable Agriculture Standard (Rainforest Alliance)	UTZ Certified
Environmental impacts	213	9	8	4
Social impacts	22	38	5	4
Economic impacts	29*	53	9	6
Total	240	56	13	6
Published in peer-reviewed journals	213	28	4	2
Studies addressing only that standard (not several standards)	228	44	2	2

*Only studies with regard to producers in developing countries were considered.

Most identified impact studies deal with the environmental impacts of organic agriculture. This might be due to the fact that organic production is supported by governments for its

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environmental benefits in some regions and hence, more money is available for its research.

There are also a considerable number of studies on fairtrade, the majority of which are on socio-economic impacts. For the Sustainable Agriculture Standard (certified by Rainforest Alliance) and UTZ Certified, only few impact studies have been conducted so far. More research is needed before conclusions can be made on their real-life sustainability impacts. No scientific impact assessments were found for the Roundtables on Sustainable Palm Oil or Responsible Soy.

Concerning environmental impacts, there is overwhelming evidence for wide-ranging benefits of organic agriculture in comparison with conventional agriculture. Higher biodiversity is seen in plants, earthworm, and arthropod populations (30 percent more species, 50 percent higher abundance), water and air quality is shown to be better, lower greenhouse gas emissions, less energy use, less soil erosion, higher soil organic matter content and stocks as well as biologically more active soils. Organic farming avoids chemical/synthetic inputs (herbicides, pesticides, and synthetic fertilizers) and allows only a limited use of veterinary pharmaceutical products. These bans immediately and greatly reduce adverse environmental impacts.

Usually, farmers can only cope with the restrictions made by organic standards by redesigning their farms in order to increase resilience and self-regulation. This is typically done by diversifying crop rotations, using efficient and low-loss compost and manure recycling, mulch farming, cover crops, hedge rows, wildflower strips, and natural regeneration plots. However, with regard to tropical and subtropical production systems organic farming needs further development and appropriate pedoclimatic adaptations.

Social improvements due to certification (e.g. contentment of farmers and improved cooperation) are difficult to measure and quantify. It is therefore not surprising that anecdotal evidence prevails here. According to the available information, participation in a functioning producer group with Western world partners—often with external support such as paid training—is usually associated with positive social effects, such as team spirit, motivation, satisfaction, improved access to education, and empowerment. The most evidence available concerning social benefits is seen with fairtrade. Many reports analyzing fairtrade describe higher producer confidence and satisfaction, improved access to knowledge and education, higher democracy and participation in producer organizations.

Concerning economic impacts on farmers in the South, research finds that the certification schemes analyzed usually provide benefits to their participating producers—most importantly through price premiums and/or improved market access and trade relationships. Farm income tends to increase, but sometimes with only marginal effect. Some critical papers question whether certification schemes really reach the poorest and whether they might negatively affect non-participating producers in the same or neighboring rural communities. Fairtrade, the only scheme offering a guaranteed minimum price, does not seem to necessarily outperform the other schemes when the market prices for the products are generally good. However, the minimum price can provide a safety net in times of low world market prices.

What is frequently mentioned as an economic barrier to organic certification is the 2-year conversion period. During this period yields may decline and since no premium is paid during this time, financial hardship can ensue. After the conversion period, however, yields

usually increase and the scheme becomes economically profitable. In developing countries, it is important to provide support to producers that are in the process of getting certified (financial support and training)—in the case of organic, support is appreciated throughout the conversion period.

In conclusion, sufficient evidence affirms a wide-range of environmental and economic benefits of organic agriculture (but with an emphasis on the western world). For fairtrade, most studies on social and economic benefits report positive impacts on producers in developing countries but, only half of the studies identified appeared in peer-reviewed journals, and many are anecdotal accounts taken from specific projects. For the Sustainable Agriculture Standard (Rainforest Alliance), UTZ Certified, and many other voluntary standards that have arisen in recent years, little knowledge on real-life impacts is available thus far. This study was a first step to assess the impacts and benefits of certification in the agricultural sector. Further development and research is needed, as well as the integration of research results into the standards.

This article is based on:

- Niggli, Urs, Julia Jawtusich, Bernadette Oehen (2011, unpublished): “Do standards and certification in the agricultural sector matter for sustainability? A review of the state of research.” Research Institute of Organic Agriculture (FiBL), Switzerland and RESOLVE, USA.

Links

- www.rainforest-alliance.org/agriculture/standards
- www.sanstandards.org
- www.utzcertified.org
- www.fairtrade.net
- www.rspo.org
- www.responsiblesoy.org

Further reading

For certification in general

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