

IAFN Background

Agroecology Definitions

Since its emergence in the 1960s as a discipline focused on studying the interaction between crops and the environment, agroecology has helped increase our understanding of agriculture's environmental impact.¹ In particular, it has shed light on how the local context of different ecological zones and the agroecosystem affect productivity and agriculture practices.

Agroecology is the study of ecological processes that operate in agricultural production systems and not associated with any particular method of farming.

“Systems high in sustainability can be taken as those that aim to make the best use of environmental goods and services whilst not damaging these assets. [] The idea of agricultural sustainability, though, does not mean ruling out any technologies or practices on ideological grounds.” (Pretty, Jules; University of Essex, 2006)

Business is aware of three, broadly different, interpretations of agroecology today: as a scientific discipline, an agricultural practice, or as a political or social movement. We believe these multiple definitions and usages lead to confusion among scientists, policy-makers and practitioners and side tracks from the discussions on how to meet the SDGs.

FAO is collecting definitions:

<http://www.fao.org/agroecology/knowledge/definitions/en/>

Several ideological approaches to farming exist in the public debate. Some schools of thought actively seek to reframe the original concept of agroecology as a farming ‘practice’ of its own or even as a political or social movement. *Wezel et al.*, , notes that the concept has evolved over time, as agricultural product systems did, partly in reaction to changes in food production systems and increased uptake of certain tools, such as hybrid crops and fertilizers, since the 1970s.²

Others seek to frame agroecology in terms of a political or social movement. For example, the definition put forward by Francis et al. encompasses not only physical elements but also consumers and producers as part of the food system.³

Agroecology as a movement is often portrayed in opposition to current agriculture practices. Proponents claim to stand for agricultural systems that are more beneficial to farmers and society than existing ones. It is seen as broadly opposing the use of external inputs, favoring low-technology practices and professing to be more equitable in its outcomes, and sometimes

¹ OECD glossary, <https://stats.oecd.org/glossary/detail.asp?ID=81>

² Wezel et al, “Agroecology as a science, a movement and a practice”, *Agronomy for Sustainable Development*, Dec 2009, Vol 29, Issue 4, pp 503-515

³ Francis C. et al. (2003) *Agroecology: The ecology of food systems*, *J. Sustain. Agr.* 22, 99–118.

equated with organic agriculture.

Business does not believe that agroecology should be viewed as a separate farming system; indeed it is important to recognize that there are no 'agroecological practices' as such. In fact, many of the practices promoted under the heading 'agroecological farming' are already best practice, such as crop rotation or soil fertility management, which can be tailored and applied in a variety of contexts and farming systems whether it be organic, conventional, intensive or extensive, or integrating parts of different methodologies into one system, according to the local situation.⁴

However, to meet current and future demand for agricultural goods sustainably, we must not preclude any options and instead focus on what is most appropriate and scalable in any given context. All decisions must be grounded in sound scientific observation and evidence and follow the development framework of the SDGs.

Business firmly believes that a mix of practices, tools and technology should be tailored to each situation. Many practices, such as precision agriculture, conservation farming, drip irrigation, crop rotations, and integrated pest management, are supportive of and compatible with the goals of sustainability and food security. **A unilateral promotion of certain farming systems and exclusion of others would not be helpful at all and limit farmers' choices.**

A shared understanding of agroecology, built on a scientific evidence base, is critical to ensure farmers and the public receive information and knowledge that is useful. Agroecology seeks to apply ecological principles in order to design and manage agro-ecosystems in more sustainable ways. As such it supports the development of best practices, integrated solutions, and techniques that allow agriculture to minimize its ecological footprint, including approaches at the landscape level.

Agroecology should be seen as:

Agroecology is the study of the relation of agricultural crops and environment.⁵ It involves the integrated local application of sustainable agriculture. Meeting the Sustainable Development Goals (SDGs) requires locally adapted agricultural practices that foster productivity, maintain environmental sustainability and promote rural livelihoods.

⁴ For example see Altieri's description of agroecological practices: http://nature.berkeley.edu/~miguel-alt/principles_and_strategies.html. Altieri presents crop rotation, crop cover and the use of manure and compost to improve soil quality as agroecological practices. While certainly these practices do contribute to maintain soil quality, they are used in a range of farming systems.

⁵ (OECD <https://stats.oecd.org/glossary/detail.asp?ID=81>).