

Scaling-out Agroecological Production Systems

Write-up from AT3 ACAI on Agroecology

The promotion of Agroecology follows suit to the formal recommendations made by the Committee of World Food Security (CFS) and its High Level Panel of Expert (HLPE) report to foster Agroecology as an actionable and sustainable approach for contributing to a Food System transformation that enhances food security and nutrition. The editors of this write-up represent an interdisciplinary group from various constituencies. Through this solution, we aim to address the inherent complexity of food systems, whose transformation require a comprehensive and systemic approach.

Summary of proposed solution

The proposed "solution" offers a powerful approach that systemically considers different elements of food systems from production to consumption and involves all stakeholders and sectors. The concept of Agroecology does not present a narrow defined silver bullet solution but should be understood as a framework, building on core ecological principles that can be translated into a range of practices and systemic changes to be applied in a context-specific manner. FAO identifies [10 Elements of Agroecology](#) that guide policy makers, practitioners and stakeholders in operationalizing agroecological transitions. Agroecology is a scientific discipline and a recognized social movement that nowadays is underpinned by a considerable evidence base for various production contexts. The HLPE report on [Agroecological and other innovative approaches](#), and the [FAO Agroecology Hub](#) are considered common denominators for the definition and framework of Agroecology. The proposed approach mimics natural ecological systems' principles for resilient and healthy food production while addressing systemic challenges such as, depletion of soils and natural resources, biodiversity loss, pollution and climate change. It is not limited to the production side but can be linked to other FSS Actions tracks (e.g. AT 5) to avoid silo approaches. It also aims to address social challenges such as inequality and power imbalances. Finally, Agroecology as solution aims at boosting family farmers, food producers and consumer agency rather than treating them merely as beneficiaries.

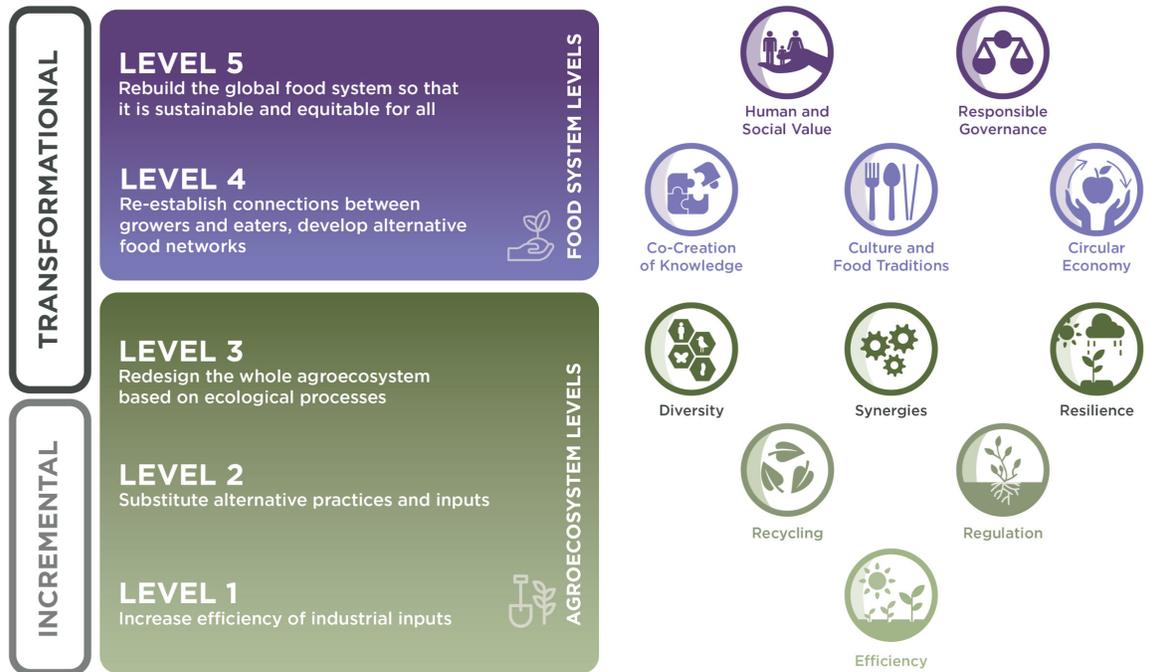
Agroecology theory of change

Building on the ecological cornerstones of healthy and fertile soils, diversity, redundancy and closing ecological cycles to increase nutrient and resource use efficiency as well as fostering natural regulation processes, Agroecology is mimicking natural ecosystems. Farming and forestry practices based on Agroecology that favor carbon storage in soils and biomass contribute to preserving natural resources and biodiversity. Beyond these biological core elements for food production, it also provides principles for key socio-economic and governance aspects in the food system (see picture below).

Agroecology is put into action in many places already, but often on rather small scale. The following key actions can boost adoption and the sustainable scale-out of this solution:

- Provide farmers with improved access to knowledge about Agroecology principles and practices via extension services, peer learning and transition mechanisms such as insurances or micro-credits.
- Redirect significant funding to Agroecology research and to the development programs that are backed by governmental and institutional support.
- Build and foster solid value chains and access to local markets for Agroecology-based products while distortions such as subsidies for unsustainable practices need to be abandoned.

5 LEVELS OF FOOD SYSTEM CHANGE AND 10+ ELEMENTS OF AGROECOLOGY



As a result of these actions, the expected short to medium-term changes are the strengthening of resilient food production with environmental benefits such as soil fertility improvement and biodiversity regeneration, the establishment of sustainable local markets and social benefits such as increased resilience of livelihoods through diversification and reduced economic dependencies. The agents of change will be women, men and young farmers and family farmer organizations that know their needs and production environment best. Furthermore, research institutes, governmental ministries, development agencies, as well as the private sector will play a crucial role in the transition process by shifting to new regulation and business models to ultimately also change consumer's behavior. In the long-term, these changes can then contribute to the transformation towards equitable and sustainable food systems.

The out-scale potential of Agroecology is based on the assumption that its principles and knowledge are increasingly recognized, disseminated and consequently implemented by a broad range of producers. Risks could be that farmers might face production challenges in the transition phase to agroecological production. Finally, the conventional farming sector will need to adapt its business model when adopting this solution.

Solution alignment to the definition and criteria for a 'FSS game changing solution'

The Agroecology approach is matching well with the FSS solution criteria. First, the proposed solution possesses a huge scaling-out potential in any context among small and mid-size farmers, who constitute the backbone of food systems. If applied widely the impact potential will have transformative character. Furthermore, Agroecology has shown to be economically viable and [proves a solid return on investment](#). Second, Agroecology is a bottom-up approach and therefore very actionable: it is embedded in farmer communities and often requires low cost measures. Through its holistic approach, Agroecology can foster capacities of farmers related to resilience, gender equality, as well as create opportunities for rural youth and provide livelihoods and health benefits for farmers. To trigger this capacity will require support via training, insurances or micro credits. Finally, there is solid evidence that the systemic approach of Agroecology considerably [contributes to the SDGs and fosters synergies](#) among them.

Agroecology is employed all over the world to various degrees and consequently there is a growing number of empirical and narrative evidence from field pilots, comprehensive programs and even national policies. Inspiring examples can be found e.g. in the IPES report [The added value of Agroecology](#), the Beacons of Hope report, on the [Agroecology Infopool](#) and helpful guidelines are provided by the HLPE report on [Agroecology and other innovative approaches](#). The broad range of scientific articles can be browsed via the [FAO Agroecology Hub](#).

Support for the Solution, context relevance and further engagement of stakeholders

There is growing support for Agroecology from different actors: The Farm to Fork Strategy of the EU Green Deal points to a better balance of nature, food systems and biodiversity. On a country level, governments such as Senegal, Togo, Mexico, India, Bhutan and France and several others actively proclaim the need for scaling up Agroecology. In the international arena, committees and working groups reporting to UN agencies such as the “friends of Agroecology” group and the “scaling-up Agroecology” initiative by the FAO, or the Committee of World Food Security (CFS) develop and endorse policy recommendations for the implementation of agroecological approaches. Research institutions like ICRAF, INRA, Coventry University and many others run comprehensive research programs. Finally, local initiatives all over the world such as [ZBNF](#) or [TIFS](#) increasingly focus on creating new concepts of crop production and livestock management, building sustainable markets and scaling up Agroecology.

One major benefit of the Agroecology approach is its context-specificity. It builds on available resources and capacities and can be applied to almost any food production environment. Consequently, agroecological principles are suited to fit into both small-scale farming systems in the Global South and the transformation of conventional agricultural systems in Europe. Despite its versatility, agroecological practices are particularly opportune in drylands and warm regions where resources are fragile or scarce. As Agroecology is also knowledge intensive, it requires a political environment that gives agency to family farmers and food producers and features strong democratic structures.

Many stakeholders around the world are already working towards the support of scaling-up Agroecology. The international agencies and research institutes mentioned above played a key role in defining the concepts and principles in Agroecology. Civil society organizations in the Civil Society Mechanism, and the Via Campesina movement have been crucial to the implementation of agroecological practices in the field. However, given its comprehensive approach, there is a broad range of key stakeholders that still need to be further involved in the process of developing and refining the solution idea. Foremost, additional country governments could learn from current Agroecology country champions, e.g. via joining the [Food Policy Forum for Change](#). Furthermore, actors from the investment side such as development agencies, impact investors and banks could engage more in the topic by learning from champions like BNP Paribas that boosted the ZBNF programme in India. In addition, national and international research institutes that focus on rather conventional farming approaches should be more engaged in fostering Agroecology related research. Finally, private sector actors have the potential to catalyze the out-scaling of Agroecology, but they are currently low in numbers. Accelerator approaches could be replicated from champion actors that successfully have integrated Agroecology principles in their business models. For all this, a broad range of actors from all types of constituencies and foremost family farmers and their associations could provide guidance and support for the questions and needs that the above mentioned actors might have.