



# Enhancing opportunities for agroecological transformations of farming and food systems in Europe—addressing missing links

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AE4EU

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## The challenge

Our current food systems cannot continue as they are. Soils, rivers, and the atmosphere are polluted, biodiversity, in particular of insects, and ecosystem services are declining rapidly due to continued use of chemical industrial agricultural inputs, while a third of all food produced is wasted. In addition, the lack of ‘animal welfare’ (lack of daylight, not free-range), and ‘farmer welfare’ (long hours, low social status) is unsustainable.

Agroecology aims to comprehensively transform food and farming systems in all dimensions, from production to distribution and consumption as well as governance. The aim is to achieve greater environmental and societal benefits while reversing the negative effects caused by existing food systems. Yet, an agroecological transformation – involving a range of transitions in relation to the above-mentioned dimensions of farming and food systems – requires valuing agroecology and making available investments that strengthen innovative agroecological approaches, support new (types of) markets, and help food system actors break free of current lock-ins. Knowing where the constraints and challenges lie, as well as knowing how these could be addressed, is important for enhancing existing strategies and policies, overcoming piecemeal engineering and window dressing, and taking advantage of the full potential of agroecology.

This policy brief provides a short synthesis of insights that emerged from various interactions with key stakeholders involved in the co-creation of the European Network for Agroecological Food systems (ENAF), the various strands of work done as part of AE4EU, and recent literature. This is meant to complement already ongoing initiatives in Europe such as the EU Agroecology Partnership.



## The potential and constraints of agroecology in Europe

The potential of agroecology is multifaceted.

Agroecology is an answer to a need: the widely agreed need for a food system transformation to sustainability, the need for a coherent, integral food system perspective based on a (holistic) systems perspective. Agroecology, in the way we present it here, provides just that.

Agroecology is inherently resilience oriented. Agroecology offers value-based principles that are practical in application. Food systems do not become more resilient by aiming for certain goals or visions but through the application of resilience principles/characteristics in the process of working towards such goals and overall vision. This creates a much stronger basis for working towards sustainable food systems.

Agroecology supports the maintenance of uniqueness in a variety of ways by creating room for applications that are fine-tuned to local circumstances. Rather than delivering standardised practices, it focuses on local, cultural, societal, and economic appropriateness. Thus, it counteracts the McDonaldization of society and in turn supports the persistence of variety and uniqueness, which have always been the beauties of cultural diversity and the heritage of unique agricultural systems and practices across the globe.

Agroecology is inherently transdisciplinary in its orientation, a platform where science and society (through movements) not only meet and talk but truly work together, combining different rationalities, experiences, and methods towards transdisciplinary collaboration. In other words, it is inherently transdisciplinary in nature, which cannot be said of mainstream approaches to farming and food systems.

Agroecology is not mere idealism but evidence oriented. There is a growing evidence-base for the efficacy of agroecology for food security. It has been

stated that “a fully agro-ecological Europe [...] could sustainably feed 530 million Europeans by 2050” (Aubert, 2018).

Nevertheless, there are also constraints to agroecology. In the area of transforming agricultural production systems, a constraint is in a lack of practical knowledge about agroecological farming systems. The application of mixed cropping, trap crops, push-pull-systems, wildflower strips tailored to the needs of functionally important arthropod groups such as crop pollinators or natural biocontrol agents, companion plants, or permanent soil cover is almost unknown in practical farming of Europe. Some research exists, but there is a lack of evidence and hence trust in the applicability and functioning (from economic, social and environmental perspectives) of such farming practices. A further constraint is in the missing regional infrastructures for processing produce (e.g. mills, slaughterhouses, roasting facilities etc.), limiting the possibility of establishing regional value chains for agroecological products.

## Addressing missing links

Over the past few years, a variety of specific recommendations on enhancing conditions for agroecological transitions have been provided by different researchers and groups of researchers. Some of these recommendations are included in this report, but not all. So far, there appears to be a tendency to cherry-pick loose elements from documented agroecological theory and practice that does not do justice to the integral perspective and the range of opportunities that have been put forward.

Sustainable agriculture and fair and sustainable food systems cannot be achieved through the application of a series of solutions, let alone mere technical/technological solutions. An integrated and coherent approach is needed not just a set of isolated actions. An approach is needed that provides concrete guidance in the form of good principles. And an approach is needed that allows for contextualisation

of common principles to create tailor-made specific application options that connect to relevant context conditions. Agroecology offers pathways to localising, contextualising, and diversifying farming and food systems, thus connecting to place-based and identity-oriented values. It is therefore well positioned to help guide European as well as member state policies in relation to farming and food system transformations over the next decades.

The term ‘agroecology’ does not automatically convey a clear image of what the related integral perspective on farming and food (systems) entails. It may serve its purpose when considered as an umbrella for a range of specific approaches such as organic farming, regenerative farming, etc. However, in its reference to being a science, a practice, and a movement, this is not yet a common understanding. Different people interpret the term agroecology in quite different ways.. Perhaps this is difficult to change, but in that case, more efforts should be invested into communicating the broad perspective of agroecology, if it is to become a more prominent orientation of farming and food systems in Europe.

Partly related to the difficulties related to communicating agroecology, the term has been embraced by many who either limit its meaning to the field of agronomy or use it for window-dressing conventional approaches to agriculture. These two are related in that the restricted interpretation of agroecology makes it possible to apply it to any form of agriculture, as there is always some level of interaction between agronomy and ecology. This reiterates the need for doing something to 1) better distinguish the broad view on agroecology from other views and then to 2) communicate this view better in appropriate fora. This includes the need to more actively engage with conventional agriculture in ways that are appealing to farmers and other actors in the food system.

There is a significant combined potential and capabilities in existing national and European networks around agroecology that can contribute effectively to agroecological transformations of agricultural and food systems in Europe. This is where the energy and motivation for agroecology is. This is where the people

are who dare explore new ways forward and address concerns regarding the unsustainability of current farming and food systems. This is where younger generations are involved—it is critical to involve them in exploring ways forward and give them a serious and significant role in food system transformation. This includes investment by the EU and member states in knowledgeable and experienced agroecologists as ambassadors of and advocates for the integrated farming and food systems approach to agroecology. The European Network for Agroecological Food systems (ENAF), initiated by partners in AE4EU, is one example of related initiatives that are ready for investment.

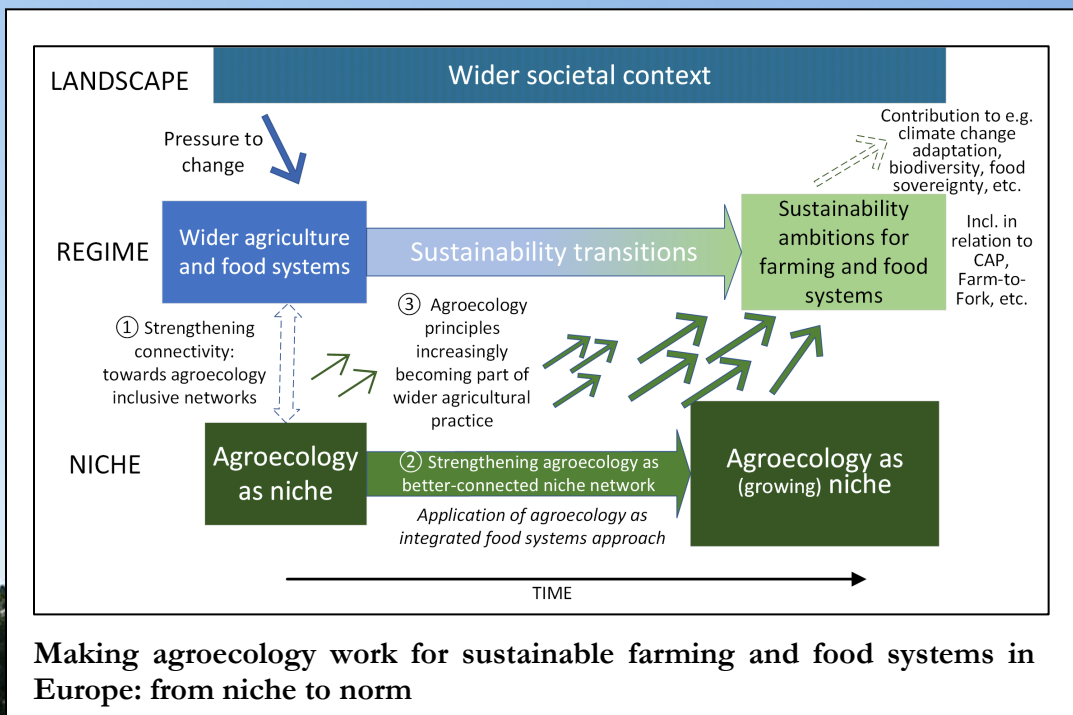
Although a systems approach is critical in relation to farming and food system transitions to sustainability, context-appropriateness, and societal fairness, in the end it is people who make the difference. What makes farmers interested in agroecology, what makes policymakers interested in supporting transitions to agroecology, what makes consumers interested in investing in sustainable agriculture and food, and what makes managers of (large) companies interested in making the value chain work for transitions to agroecology? The core motivations of all these people makes opportunities tilt one way or the other. These motivations are shaped by people's worldviews, values, and principles, but also by what they do and don't know about. Related communications are a battleground for the minds and hearts of people. European and country-level decision-makers need to become more aware of this battleground and invest more in connecting to the core motivations and values behind agroecology through information and communication.

If transitions to agroecology do not involve a serious rethinking of the foundations of mainstream farming and food systems, they will not add up to a sustainable transformation. This means not putting “new wine in old wine skins”! Current dominant approaches to technology, innovation, and scaling of innovations, as well as payments made to farmers need to be put up for debate. These approaches tend to be considered

as having a definitive say on the way forward for farming and food systems. They tend to criticize agroecological approaches for not presenting a realistic alternative, or even go as far as stating that embracing these approaches would increase poverty and vulnerability. This may, however, in many cases be considered as “technology bluff”, as Jacques Ellul (1986) framed it.

Investments in agricultural research and development as well as investments in value chains have gone mostly to actors operating with conventional approaches. Hence, conventional approaches have made big steps in fine-tuning systems and applications. In terms of efficiency and productivity, agroecology may be lagging behind, but that is not strange given that only a small percentage of the amount invested in fine-tuning conventional approaches is invested in fine-tuning agroecological approaches. Moreover, agroecology does not reduce farming and food systems to just their efficiency and productivity but pays due attention to other values, to externalized costs, ecosystem services, healthcare implications, farmer livelihoods, etc. To see the full potential of agroecology materialise, serious investment in agroecology as science, practice, and movement is needed. Currently, one very practical way to do this would be to create new funding options for this through both the EU Partnership on Agroecology and through the EU Partnership on Sustainable Food Systems.

Agroecology is not just about another way to approach farming and food systems. It inherently activates resilience characteristics (diversity, redundancy, flexibility, connectivity, collaboration, etc.) of food systems (Zurek et al. 2022). Resilience is ever more important as we face increasing challenges related to the impact of climate change and conflicts. Mixed crop-livestock systems, integration of perennial crops and trees/shrubs into farming systems are important. Lower-intensity or lower-input agriculture enhances resilience by not letting animals, soils, and crops ‘walk on their toes’ of maximum productivity. These are just some examples of enhancing resilience of farming and food systems and reducing their vulnerability through agroecology.



### Inspiration from the newly established Dutch Agroecology Network

Since World War II, the general trend within the Dutch agricultural sector has been to increase and highly intensify (i.e. efficient or industrialized) production, causing negative side-effects for biodiversity and the natural environment. However, agroecology is currently gaining popularity in The Netherlands, which can be attributed to the emergence and success of various associations, foundations, cooperatives, and organisations that promote it.

Since 2012 joint activities and efforts of farmers' organisations, NGOs, students and researchers have given a strong momentum to agroecology. They created the network 'Voedsel Anders' around the term agroecology. More than 2,500 farmers, citizens, activists, researchers, and students from The Netherlands and Flanders, Belgium, participated in a growing network for an alternative food system. Key issues were fair price for farmers, farming in harmony with nature, less power for the agroindustry, healthy and tasty food, short supply chains, fair supply chains, access to land, and influence of farmers and citizens on food.

As of late 2023, first results are promising. Through collaboration between farmers, NGOs, and researchers, and by reaching out to other networks and policymakers, the visibility and potential impact of the Dutch agroecology network has increased considerably. As highlighted during the creation of the network, the commitment of key actors is crucial for building a strong network and organisation. Developing trust and understanding between farmers, NGOs and researchers needs time, but it was found to be crucial for successful joint action. Relying on a set of key principles (based on Nyéléni declaration) is important to prevent greenwashing and preserve the transformative character and orientation of the network.

## Recommendations

- 1) EU and country-level policies and initiatives on agroecology should consider the variety of specific and practical recommendations for the agroecological transformation of farming and food systems provided over the past few years by a range of agroecology researchers.
- 2) European and country governments must rethink currently dominant approaches to technology, innovation and scaling.
- 3) European and country governments must rethink currently dominant approaches to payments and subsidies for farmers and farming (e.g. in the CAP).
- 4) Agroecology should be embraced as an integrated farming and food systems approach.
- 5) Efforts related to agroecological transitions need to pay due attention to the personal motivation dynamics.
- 6) Agroecology as a term should be reconsidered in light of the need to better communicate agroecology and its related principles and aspired futures.
- 7) Not only consult but also make active use of the potential of what grassroots, farmer organisation, and agroecological movements can offer to transitions towards agroecology.
- 8) Make serious efforts to overcome the 'low ceiling': limit co-optation and restricted interpretations of agroecology that dilute and weaken the necessary transitions to agroecology.
- 9) Create space for transitions to agroecology by investing in its underlying science, explorative practice, and related movements.
- 10) Embrace agroecology as in fact the only coherent and integrated approach to enhancing the resilience and reducing the vulnerability of farming and food systems.

## The way forward

There are said to be three major themes of barriers to agroecological transitions: actor capacity, value chain, and policy (Gava et al. 2022). This policy brief illustrates how unlocking the potential of agroecology goes deeper than addressing these challenges, because they (e.g. the lack of appropriate policies) connect to deeper root causes related to mindsets, dispositions, and values. We do see more happening than ever before on the European landscape, putting agroecology on (policy) agendas (Miller et al. 2022). The EU Agroecology Partnership offers new opportunities for advancing agroecology through its orientation on strengthening living labs and research infrastructures. However, as significant as this is for agroecology in Europe, it also has its limitations. Therefore, complementary initiatives and approaches are necessary to enhance opportunities for agroecological transformation of farming and food systems in Europe. The European Network for Agroecological Food systems (ENAF) is but one of such initiatives.





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## Authors

Seerp Wigboldus, Jan Hassink, Margriet Goris, Andrew Dawson—Wageningen University & Research

Jens Dauber—Thuenen Institute of Biodiversity

Boglarka Bozsogi—Agroecology Europe

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