A 10+13 AGROECOLOGY APPROACH TO SHAPE POLICIES AND TRANSFORM EU FOOD SYSTEMS

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This policy paper puts forward a proposal to mainstream agroecology into the policies governing EU food systems. It builds on the consensual vision of a coalition of EU civil society, farmers and scientific organizations to use the FAO '10 Elements of Agroecology' and '13 Agroecological Principles' as a framework to develop the appropriate instruments and targets for EU policies.

Food systems in the European Union (EU) and around the world are facing a host of severe environmental and social challenges, and are falling short on sustainably providing healthy, safe, adequate and culturally appropriate food and nutrition for all. These systems are driving environmental degradation and loss of vital ecosystem services, economic hardship for farmers, socio-economic inequities, and for many, debilitating impacts on health and food security – and thus urgently need to be redesigned.[1] Promoting new narratives, backed by science, practice and people, is fundamental to advancing the profound changes that are required in order to move towards sustainable food systems in the EU.

Agroecology, 'the science of applying ecological concepts and principles to the design and management of sustainable agriculture and food systems',[2] has been identified by a series of landmark international reports as a key enabler for food systems transformation.[3,4,5,6,7] Agroecology encompasses various approaches, including organic and regenerative farming, and includes amongst its goals the need to maximise biodiversity and stimulate interactions between different plant and animal species as part of holistic strategies to build long-term fertility, reduce pest and disease risk, protect freshwater systems, secure pollination services, safeguard healthy agroecosystems and secure livelihoods.[8] By valuing local and traditional knowledge and linking it with scientific information, agroecology has the unique potential to succeed where current systems are failing, namely in reconciling concerns such as food security, ecosystem protection, biodiversity loss, climate change, nutritional health, poverty, social, ecological and economic inequalities, as well as other interconnected and complex challenges.

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[1] IPES-Food (2019). Towards a Common Food Policy for the European Union: The policy reform and realignment that is required to build sustainable food systems in Europe.

[2] Gliessman, S. R. (2015). Agroecology: the ecology of sustainable food systems, 3rd ed. CRC press.

[3] IPBES (2018). Summary for policymakers of the assessment report on land degradation and restoration of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services [Scholes, R. J.,Montanarella, L., Brainich, E., Barger, N., ten Brink, B., Cantele, M., ... & Kohler, F.]

[4] IPCC (2019). Summary for Policymakers. In: Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems [P.R. Shukla, J. Skea, E. Calvo Buendia, V. Masson-Delmotte, H.- O. Pörtner, D. C. Roberts, P. Zhai, R. Slade, S. Connors, R. van Diemen, M. Ferrat, E. Haughey, S. Luz, S. Neogi, M. Pathak, J. Petzold, J. Portugal Pereira, P. Vyas, E. Huntley, K. Kissick, M. Belkacemi, J. Malley, (eds.)].

[5] Independent Group of Scientists appointed by the Secretary-General, Global Sustainable Development Report (2019). The Future is Now – Science for Achieving Sustainable Development. United Nations, New York.

[6] Global Commission on Adaptation (2019). Adapt now: A global call for leadership on climate resilience.

[7] HLPE (2019). Agroecological and other innovative approaches for sustainable agriculture and food systems that enhance food security and nutrition. A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security, Rome.

[8] IPES-Food (2016). From uniformity to diversity: a paradigm shift from industrial agriculture to diversified agroecological systems. International Panel of Experts on Sustainable Food systems.

Agroecology is the application of the science of ecology (the science of how nature works) to the study, design, and management of sustainable food systems; the integration of the diverse knowledge systems generated by food system practitioners to serve social movements that are promoting the transition to just and sovereign food systems.[9,10] In other words, agroecology is understood as a science, a practice, and as a social movement within the food sovereignty movement, in line with the action-oriented description of agroecology agreed upon in the 2015 Nyéléni Declaration.[11]

The ability to mainstream agroecology within the EU has been validated by scientific work highlighting its co-benefits in terms of ecosystem services and environmental regeneration.[12] The inclusion of greater agricultural diversity – both animal and plant – in agroecological practices is more conducive to producing the foods that underpin healthier and more balanced diets, while also generating higher economic value.[13] This opportunity has received broad support by civil society, as shown in the 2019 EESC own-initiative opinion *"Promoting short and alternative food supply chains in the EU: the role of agroecology"*.[14]

In other words, agroecology can serve as a pivotal strategy to achieve a number of crucial EU policy objectives, including reverting biodiversity collapse, mitigating and adapting to climate change, and reducing pesticide use.

On 20 May 2020, the European Commission published the EU **Biodiversity Strategy** (https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1590574123338&uri=CELEX:52020DC0380) and the **Farm to Fork Strategy** (https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020DC0381) as key components of the European Green Deal. Both strategies, aimed at guiding the European Union towards more sustainable food systems over the next 10 years, acknowledge the significant role that agroecological transformation will play in underpinning a food systems transformation. Indeed, meeting (or even going beyond) the targets of these two strategies – including restoring landscape features or significantly reducing pesticide and fertiliser use – already implies taking an agroecological approach to farming. It therefore becomes crucial to establish the principles to embed agroecology into future EU policies.

The Food and Agriculture Organization of the United Nations (FAO)'s **'10 Elements of Agroecology'** (http://www.fao.org/documents/card/en/c/I9037EN) and the FAO Committee on Food Security High-Level Panel of Experts' **13 Agroecological Principles** (http://www.fao.org/3/ca5602en/ca5602en.pdf) represent a comprehensive attempt to crystallize the definition and application of agroecology through a series of principles. The 10 Elements and the 13 Principles are complementary:

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[9] Gliessman, S.R. (2015). Agroecology: The Ecology of Sustainable Food Systems, 3rd ed., Boca Raton FL: CRC Press/Taylor and Francis Group.

[10] FAO (2018). Scaling up Agroecology Initiative: Transforming Food and Agricultural Systems in Support of the SDGs, Rome: Food and Agriculture Organization of the United Nations.

[11] International Forum for Agroecology (2015). 'Declaration of the International Forum for Agroecology', Nyéléni, Mali.

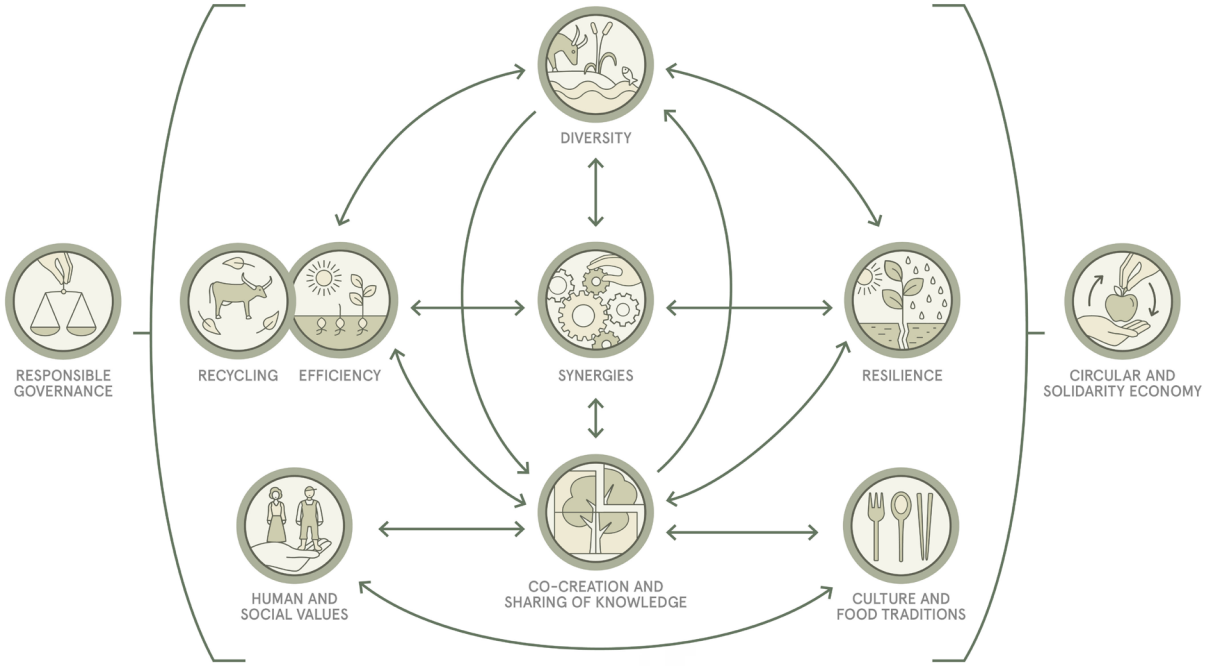
[12] Poux, X., & Aubert, P. M. (2018). An agroecological Europe in 2050: multifunctional agriculture for healthy eating. Findings from the Ten Years For Agroecology (TYFA) modelling exercise, Iddri-AScA, Study, (09/18).

[13] Van der Ploeg, J. D., Barjolle, D., Bruil, J., Brunori, G., Madureira, L. M. C., Dessein, J., ... & Gorlach, K. (2019). The economic potential of agroecology: Empirical evidence from Europe. Journal of Rural Studies, 71, 46-61.

[14] European Economic and Social Committee (2019). Promoting short and alternative food supply chains in the EU: the role of agroecology. NAT/763.

the Elements define agroecology in a global and inclusive way, while the Principles list the practices and the concepts that must be applied for agroecological transition to take place. The 10 Elements and the 13 Principles serve as an analytical tool to operationalise agroecology, and are meant to support the planning, management, and evaluation of an agroecological transition. Given the comprehensive understanding of agroecology provided by these Elements and Principles, it could be argued that they themselves present a ready-made assessment tool against which policies supporting agroecology should be designed and measured.[15] In other words, these Elements and Principles provide a framework for what should be taken into account in all relevant policies to support agroecology, whether at international, European, national, regional or local levels.

For example, the FAO Tool for Agroecological Performance Evaluation (TAPE)[16] is already being used as an analytical framework that measures the level of agroecological transition of farms and other productive systems. It is founded on the 10 Elements of Agroecology and integrates the 13 Principles into its indicators to monitor and evaluate the impacts of projects and policies, as well as to identify strengths and weaknesses in sustainable production. It is thus intended to guide the development of public policies that support the processes of agroecological transitions at different levels.



The FAO 10 Elements of Agroecology

As part of both the EU Biodiversity and Farm to Fork strategies, the EU will adopt a legal framework for Sustainable Food Systems. **The 10 Elements and 13 Principles – and tools such as TAPE – should therefore be used to guide the design of policy interventions across Europe, and enable national authorities to address the EU targets stemming from the EU Green Deal framework**.

In parallel, EU funds – especially from the Common Agricultural Policy (CAP) – will be available in each Member State. Member States will have a significant responsibility to enforce new EU standards and to design new schemes to support the transition towards agroecology and sustainable food systems. In this context, the 10 Elements and the 13 Principles should be

[15] Clément & Ajena, (forthcoming). The path of least resilience: Assessing the sustainability of CRISPR.

[16] FAO (2019). TAPE Tool for Agroecology Performance Evaluation 2019 – Process of development and guidelines for application. Test version. Rome

used by Member States as a guide to define their strategies and interventions. Under the guidance of the EU Commission, Member States should be actively encouraged to set up programmes where a combination of rules and financial supports fit within the logic of agroecology. For example, for the future CAP, Member States would need to draw up National Strategic Plans (NSP) and design their interventions according to specific, evidence-based targets. In this exercise, **the 10 Elements and the 13 Principles should be used as a guide to embed agroecology into NSPs**, including eco-schemes and Rural Development Interventions. Regional EU projects designed around the Elements and Principles should also be considered.

To conclude, agroecology is not merely a set of agricultural practices or one innovation amongst others. It is a paradigm shift in our food systems model that moves us towards diverse knowledge-intensive and ecology-based systems. Agroecology is also about changing social relations, empowering farmers, adding value locally and privileging short value chains that link consumers and producers. Agroecology is not one of the tools in a toolbox, it is a different toolbox altogether. The EU must recognise agroecology as the key pathway to transform EU food and farming systems, embracing the whole potential of agroecology through the framework proposed above, and translate this commitment into all its future policies relating to food systems.

LIST OF SIGNATORIES