



4.08 Promote inclusive and sustainable agroecological network chains for small farmers and indigenous communities linked to rural and urban consumers

1. What, in brief, is the solution?

Support the transition of 10 value chains in 50 countries towards solutions based on agro-ecological principles. This should rely on a strong inclusion of small farmers and indigenous communities, and be achieved by enhancing the quality and relevance of services supporting the production, transformation, distribution, promotion and market access of agroecological products.

2. What was/were the source(s) from which this solution emerged?

Among the possible pathways to transform agricultural and food systems, agroecology is a nature-positive approach strongly supported by farmer organizations, researchers, civil society, innovative private firms, and a coalition of donors and countries. The HLPE report (2019)¹ highlights the importance of agroecology and innovative approaches (regenerative agriculture, nature based-solutions, organic agriculture or agroforestry). FAO provides principles to define agroecological approaches based on technical and social criteria².

The thinking related to agroecology is: (i) there is an urgent need to design more resilient and sustainable farming systems and value chains especially by enhancing and making use of ecological processes and biological diversity (at crop, farm and territorial level), (ii) solutions need to take into account the needs of the actors (farmers and value chain actors) and the type of farming, and should encompass scientific and local knowledge, as well as new technologies (improved varieties, digital tools, etc.), (iii) partnerships with actors are key for co-designing both technical innovations and organizational innovations, with a need to strengthen actors' capacity to innovate, (iv) there are no standard solutions and the solutions have to be adapted to local situations, and (vi) the metrics of success are based on footprint analysis.

3. What problem is it trying to address within food systems?

To promote agroecology at scale there is a need to enhance the quality and relevance of services supporting the agroecological production, transformation and distribution and to strengthen access to markets for agroecological products. The solution addresses these two dimensions (services and markets) in sensitive areas (e.g., the Sahelian Zone in relationship with the Great Wall Initiative for example) and specific value chains (e.g., cocoa).

4. Why is addressing that problem important for achieving the goal of your working group?

Ensuring robust and fair-priced markets for agroecologically-produced products would support the livelihoods of small-scale farmers and indigenous communities, create decent jobs across the value-chain, and strengthen the ecological resilience of local food systems, based on local values and norms.

¹ 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 <http://www.fao.org/3/ca5602en/ca5602en.pdf>

² FAO. The 10 elements of agroecology guiding the transition to sustainable food and agricultural systems, <http://www.fao.org/3/I9037EN/i9037en.pdf>



5. How can this solution address that problem (theory of change)?

Agroecology is already implemented by small farmers in many situations in all the continents (developing countries, OECD countries, etc.). It has been proven effective to produce healthy food and preserve natural resources. However, there is an urgent need to scale agroecological services to achieve the SDGs. For example, Andhra Pradesh State plans to involve 2 million farmers in agroecology³.

First, scaling agroecology requires the development of innovative services. Agricultural advisory services – such as public-sector agriculture extension systems – need to support collective action with multi-stakeholder approaches, such as cooperatives, as well as individual entrepreneurs and small start-ups. Support is needed so that these organizations can integrate agroecological technical and social dimensions. Agroecology also requires services for the provision of bio-inputs, seeds and access to finance. Bio-technologies (for activating soil fertility, composting waste, bio-pesticides, etc.) would be useful as would digital tools that facilitate the management of local knowledge, exchanges and learning or ensure support the traceability and marketing of agroecological products. Significant public investment is also needed to support research on agroecological production methods as well as mechanisms to enhance local knowledge exchanges and learning (e.g., farmer-to-farmer field schools).

Second, agroecology cannot develop at scale without access to markets that recognize and value products obtained from agroecology. Interventions to promote certification of products and processing are important, which can draw from numerous experiences: promotion of Geographical Indications within national frameworks, development of sustainability standards from the public or private sector with third-party certifications or participatory certifications, the rise of labels and private brands supporting sustainable approaches, etc. However, these certifications must take into account the principles of agroecology and balance the economic, social and environmental dimensions of sustainability. In addition, they must be coupled with other mechanisms to be effective and ensure real changes in production and marketing practices (training, fair and inclusive distribution of value added, support for producers' income, control of fraud, etc.). Short supply chains should be encouraged in particular to allow better promotion of local products and to ensure diversified and quality nutrition for local consumers (e.g., public food procurement programs such as Brazil's National School Feeding Program). Funding assistance is also needed via all possible financial tools (loan, subsidy, blending), and should support producers alongside a network of small processing and marketing companies.

6. Why does this solution align to the definition and criteria for a 'game changing solution' developed by the Summit?

This solution is about change at scale by ensuring equitable livelihood opportunities for millions of small-scaled and indigenous farmers in the establishment of 10 value chains and 50 countries. Past experience and scientific evidence demonstrates the feasibility of scaling up agroecology, while agroecology is inherently about sustainability from both an environmental and social perspective. Furthermore, committing significant public and international investment in scaling up fair markets focused on agroecology would be a true departure from existing practice which has tended to invest in industrialized forms of agriculture.

³ TMG (2020) Systemic Challenges, Systemic Responses. Innovating Adaptation to Climate Change through Agroecology. Working Paper. <https://globalsoilweek.org/wp-content/uploads/2020/12/Systemic-Challenges-Systemic-Responses.pdf>



7. Existing evidence supporting the argument that this solution will work, or at least achieve the initial outcomes

A large amount of scientific evidence and experience in the field provides strong support for scaling up agroecology (see the annex for references).

8. What is the current and/or likely political support for this idea?

There are numerous coalitions of actors who have long-supported agroecology at different levels, from local to global scales, including member states in Europe, countries in other continents, international grassroots networks and organizations, and research alliances. Some groups (countries, firms, associations) are clearly against agroecology and support high-input industrial agriculture and other Green Revolution approaches, in relationship with some elements of the private sector which invest in and profit from these technologies. upcoming CFS PR-AEAOIA and encourage their uptake as part of this solution. The upcoming CFS Policy Recommendations on Agroecological and other Innovative approaches can provide guidance at country level, and their uptake can be part of this solution.

9. Are there certain contexts for which this solution is particularly well suited, or, not well-suited.

The solution is well suited in contexts where family farms are dominant in the agricultural sector or in regions where the Green Revolution paradigm does not work or would cause irreparable environmental and economic harm (e.g., degraded areas, areas with high climatic risks, land without irrigation, and places with significant endemic agri-biodiversity, places where farmers are severely indebted).

Annex - Synthesis papers review

- Smith OM, Cohen AL, Rieser CJ, Davis A, Taylor JM, Adesanya AW, Jones MS, Meier AR, Reganold JP, Orpet RJ, Northfield TD. 2019. Organic farming provides reliable environmental benefits but increases variability in crop yields: a global meta-analysis. *Frontiers in Sustainable Food Systems*, 3:82. DOI: [10.3389/fsufs.2019.00082](https://doi.org/10.3389/fsufs.2019.00082)
- Palomo-Campesino S, González JA, García-Llorente M. 2018. Exploring the connections between agroecological practices and ecosystem services: a systematic literature review. *Sustainability*, 10(12):4339. DOI: [10.3390/su10124339](https://doi.org/10.3390/su10124339)
- Kuyah S, Whitney CW, Jonsson M, Sileshi GW, Öborn I, Muthuri CW, Luedeling E. 2019. Agroforestry delivers a win-win solution for ecosystem services in sub-Saharan Africa. A meta-analysis. *Agronomy for Sustainable Development*, 39:47. DOI: [10.1007/s13593-019-0589-8](https://doi.org/10.1007/s13593-019-0589-8)
- Barral MP, Benayas JMR, Meli P, Maceira NO. 2015. Quantifying the impacts of ecological restoration on biodiversity and ecosystem services in agroecosystems: A global meta-analysis. *Agriculture, Ecosystems & Environment*, 202:223-231.
- Neither W, Jacobi J, Blaser WJ, Andres C, Armengot L. 2020. Cocoa agroforestry systems versus monocultures: a multi-dimensional meta-analysis. *Environmental Research Letters*, 15(10). DOI: [10.1088/1748-9326/abb053](https://doi.org/10.1088/1748-9326/abb053)
- Corbeels M, Cardinael R, Naudin K, Guibert H, Torquebiau E. 2019. The 4 per 1000 goal and soil carbon storage under agroforestry and conservation agriculture systems in sub-Saharan Africa. *Soil and Tillage Research*, 188:16-26. DOI: [10.1016/j.still.2018.02.015](https://doi.org/10.1016/j.still.2018.02.015)



- Gattinger, A., A. Muller, M. Haeni, C. Skinner, A. Fliessbach, et al. 2012. Enhanced top soil carbon stocks under organic farming. *Proceedings of the National Academy of Sciences of the United States of America* 109(44).
- Feliciano D, Ledo A, Hillier J, Nayak DR. 2018. Which agroforestry options give the greatest soil and above ground carbon benefits in different world regions? *Agriculture, Ecosystems & Environment*, 254:117-129. DOI: [10.1016/j.agee.2017.11.032](https://doi.org/10.1016/j.agee.2017.11.032)
- Mier y Terán Giménez Cacho M, Giraldo OF, Aldasoro M, Morales H, Ferguson BG, Rosset P, Khadse A, Campos C. 2018. Bringing agroecology to scale: Key drivers and emblematic cases. *Agroecology and sustainable food systems*, 42(6):637-665. DOI: [10.1080/21683565.2018.1443313](https://doi.org/10.1080/21683565.2018.1443313)
- Piñeiro V, Arias J, Dürr J, Elverdin P, Ibáñez AM, Kinengyere A, Opazo CM, Owoo N, Page JR, Prager SD, Torero M. 2020. A scoping review on incentives for adoption of sustainable agricultural practices and their outcomes. *Nature Sustainability*, 3:809-820. DOI: [10.1038/s41893-020-00617-y](https://doi.org/10.1038/s41893-020-00617-y)
- D'Annolfo R, Gemmill-Herren B, Graeub B, Garibaldi LA. 2017. A review of social and economic performance of agroecology. *International Journal of Agricultural Sustainability*, 15(6):632-644. DOI: [10.1080/14735903.2017.1398123](https://doi.org/10.1080/14735903.2017.1398123)
- Valencia, V., Wittman, H., & J. Blesh. (2019). Structuring markets for resilient farming systems. *Agronomy for Sustainable Development* 39: 25.