Farmer-based Agroecology: a societal alternative for sustainable agricultural and food systems

Over the past 50 years, globalized free-market industrialization of agricultural and food systems has not led to structural improvement in the living conditions of farmers in the South. Nor has it been successful in dealing with hunger and malnutrition, which in 2019 still affected 821 million people, most of them rural and farmer populations. On the contrary, this model has contributed to an increase in rural poverty and environmental degradation, as well as to a drop in the nutritional quality of food produced and consumed.

Industrial agriculture, which accounts for one-quarter of the world’s greenhouse gas emissions (including 44% of methane emissions and 82% of nitrous oxide emissions), is also significantly exacerbating climate change.

Faced with the limitations of the dominant agro-industrial model, we must now more than ever make a shift in paradigm and promote a transition to sustainable agricultural and food systems. This transition must be environmental, economic, social, and cultural. The purpose of this article is to propose a definition of farmer-based agroecology and to review the challenges of disseminating its model.

1. IPCC Special Report on Climate Change and Land, Summary to Policy Makers, 2019.
4. IPCC, 2019, op.cit.
According to the FAO, the development of this model has led to an estimated 75% loss of cultivated and animal biodiversity in the space of a century.\(^5\) Similarly, the most recent IPCC report states that it has led to land degradation and decline in soil fertility, exacerbated by both human and climate factors.\(^6\)

This is why it is urgent to give shape to and support a transition to farmer-based and inclusive agroecology. For this, we must develop agricultural and food models that, while reconciling economic efficiency with respect for ecosystems and the preservation of natural resources, guarantee both the right to food for all and decent living conditions for farmers. Numerous agroecological alternatives exist. They must be acknowledged and supported by public policies worldwide.

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### The three pillars of agroecology

As highlighted in the HLPE report of July 2019, agroecology is gaining in importance in scientific, agricultural, and political discussions.\(^7\) Attempts are gradually being made to study its aims and its effects. Examples are the work undertaken by FAO since 2014, which resulted in the publication of the 10 pillars of agroecology in 2018, and incorporation of agroecology into the United Nations work plan that followed the work begun by Olivier de Schutter\(^8\) at the international level. However, while the concept of agroecology is increasingly recognized today, we must make sure it is put into practice properly and not appropriated by private interests. Often, these private interests distort it, limiting it to a technical approach adapted to globalized value chains that are not compatible with either the limits of the planet or the empowerment of farmers.

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### WHAT DEFINES FARMER-BASED AGROECOLOGY?

The Declaration of Nyéléni\(^9\) mentions three key pillars that are complementary and that cannot be dealt with separately:

- the science of agricultural ecosystems;
- environmentally friendly agricultural practices;
- a social movement to defend sustainable and equitable agricultural and food systems, as opposed to industrial agriculture.

As a scientific discipline, agroecology focuses on the ecology of agricultural environments to study and design production methods based on the responsible use of natural resources. It acknowledges and is inspired by farmers’ knowledge, know-how, practices, and methods of adaptation, and it seeks to enhance these through research and research-action. This way, it can meet new challenges that are demographic, ecological, climatic, and socio-economic, etc.

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6. IPCC, 2019, op.cit.
7. HLPE, Agroecological and Other Innovative Approaches for Sustainable Agriculture and Food Systems that Enhance Food Security and Nutrition, July 2019.
In terms of agricultural practices, agroecology encompasses a range of production techniques, including combination, rotation and diversification of crops, minimum tillage, dynamic management of cultivated biodiversity by independent farmer seed systems, use of plant cover to limit irrigation and avoid soil degradation, use of organic manure by including livestock production in farming, and others. To make these practices relevant, they must be adapted to local circumstances and based on the available resources and expertise there. But a precondition is that farmers enjoy secure access to land and natural resources. The practices must also be freely replicable at low cost by farmers at different scales.

Finally, as a social movement, agroecology cannot be understood solely by its technical or environmental dimension. It involves a comprehensive overhaul of agricultural and food systems to ensure access to good-quality food for all citizens, all the while empowering farmers and providing them a decent income. Its aim is both to support rural employment and to enhance the role of farmers in society. This way, it recreates the link between cities and rural areas, in line with natural cycles of ecosystems. Agroecology therefore falls within the framework of a true political project of striving toward greater environmental and social justice based on respect for human rights. Farmer-based agroecology in this way acts as an important driver for strengthening social cohesion, thanks to several of its aspects: gradual reduction in social inequalities, promotion of local governance, food sovereignty, and empowerment of local communities.

## 2 Farmer-based agroecology, for an ecological and inclusive transition

Through its systemic approach described in these three pillars, farmer-based agroecology is part of a social transition process that must guarantee the food sovereignty of all peoples.

This transition must take into account all the stakeholders in agricultural and food systems, even up to distribution and consumption. Moreover, it must be based on the development of a genuine spirit of solidarity between farmers and citizens, in order to recreate the essential link of “from farm to fork.” Forms of production and marketing should allow for ethical economic exchanges to be developed, ensuring equitable distribution of wealth, fair remuneration for farmers, and traceability of trade.

To that end, it is crucial to encourage the development of short circuits, local distribution, and fair trade at the national and international levels. These should no longer come into conflict with trade policies. Finally, by enhancing the standing of the profession of farmer, support for farmer-based agroecology creates viable economic opportunities for young people, who are drivers of social change, thus helping to limit the phenomenon of rural exodus.

Moreover, the crucial role of women in agriculture and in knowledge transmission and know-how must be recognized and supported via an inclusive approach to access to natural and economic resources. Indeed, women are currently the foremost victims of climate change, food insecurity, and malnutrition. They face gender discrimination as well as social, legal, and cultural constraints. The fact that women account for one-third of the agricultural work force in France is an example of the important role of women in agriculture. And as for women farmers in the countries of the South, they produce half of the world’s food and yet do not enjoy the same working conditions as men. Likewise, they have less access than men to land, education, productive and financial resources, and decision-making power.

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10. FAO, 2019, op. cit.
11. CSM, Without feminism there is no agroecology! Towards healthy, sustainable and just food systems, August 2019.
13. In 2011, FAO estimated that women produce 60 to 80% of the household food in most developing countries and are responsible for half of the world’s food production.
Finally, by offering an alternative agricultural and societal model, farmer-based agroecology repositions the focus of decision-making toward the needs and interests of small-scale farmers (who provide 53% of the world’s food) and of citizens in general, rather than on the economic interests of operators in the agrifood industry. This transition must focus on decision-making, technical, and economic empowerment of farmers targeted by farmer-based agroecology. Doing so will promote a change in the balance of power and help stimulate new forms of governance. Binding rules are therefore needed to address the unbalanced decision-making and the abusive economic and commercial practices characteristic of the agro-industrial model.

Farmer-based agroecology is thus an essential part of a global process of change combining ecological and social justice and emancipation, and in which farmers and citizens are fully involved at all levels.

3 Promote ambitious and holistic farmer-based agroecology

Coordination SUD promotes farmer-based agroecology because an agricultural and food model cannot be sustainable without recognition of farmers’ rights and a comprehensive understanding of agricultural and food systems, as well as of the specific environmental, social, cultural, and political conditions of each local area.

For this transition to be effective, agricultural policies must – as highlighted in Coordination SUD Note No. 19 – especially address needs identified locally by farmer communities and take their expertise into account when determining those policies. That is why farmer-based agroecology must be promoted with an inclusive approach of cooperation, sharing of experiences, and enhancement of local agroecology organizations in the North and South.