

Position paper directed at the German Federal Government

# **STRENGTHENING AGROECOLOGY**

**FOR A FUNDAMENTAL TRANSFORMATION  
OF AGRI-FOOD SYSTEMS**

This position paper is supported by:



# ***STRENGTHENING AGROECOLOGY***

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## **Together for nature-oriented family farms and mutually supporting communities**

There is movement in the international debate on agriculture. More and more people – activists, scientists, members of organizations and some governments – have come to realize that “carry on as usual” is not an option. The IAASTD report (International Assessment of Agricultural Knowledge, Science and Technology for Development) recognized this as much back in 2009. The message has now gotten through: the negative effects of industrial agriculture have long been clear; they include water shortages, species extinction, high greenhouse-gas emissions, soil degradation, and land grabbing. They cause social, economic and ecological damage that harms the livelihoods of peasants<sup>1</sup> and the ability of ecosystems to adjust to the already noticeable effects of the climate crisis. The business model of the international pesticide and seed companies is based on the Green Revolution concept of raising yields through the massive use of synthetic fertilizers and pesticides. But this system is coming under enormous pressure to justify itself.

Just a handful of big multinationals control markets all the way from the

field to the supermarket. The takeover of Monsanto by Bayer is just one example of this power. And the power imbalances are increasing between huge corporations on one hand and peasants and workers on the other. Social inequality worldwide is on the rise. Small farms find themselves squeezed out of the market; the human rights of peasants are systematically ignored, especially in the global South; farm workers toil for a pittance and are exposed to toxic pesticides. According to a United Nations report, 200,000 people die each year from acute pesticide poisoning; 99% of these deaths occur in developing countries.

Although we grew enough food to feed 10 billion people, the number of people who go hungry has risen in the last 3 years. It has now returned to levels last seen 10 years ago. The United Nations estimates that 821 million people are currently undernourished: 17 million more than in 2016. Two billion people are malnourished – and another 1.9 billion are overweight. These figures show that our current agri-food system is incapable of ensuring good nutrition for all. Many scientific studies support this conclusion.<sup>2</sup>

An increasing number of key actors, such as the Food and Agriculture Organization of the United Nations (FAO), governments and research institutes are questioning approaches that rely on the heavy use of chemicals and energy to produce food. Despite support worth billions from governments and donors such as the Bill and Melinda Gates Foundation, the application of external inputs such as synthetic fertilizers, pesticides and high-yielding varieties in order to boost yields at any price is no longer seen as the solution for the world’s problems of poverty, hunger and environmental challenges.

The concept of agroecology offers a multitude of solutions for the fundamental transformation of the agri-food system. To support agroecology, misguided policies in agriculture, trade, research and subsidies must be transformed – and quickly.

<sup>1</sup> It is important to note here that “peasant” is used in the sense of its root meaning as “person of the land,” and not in the sense of the negative connotations it may bring up in English. La Vía Campesina, the International Peasants’ Movement, among others, have staked claims to positive and dynamic definitions of the word.

<sup>2</sup> See the end of this paper for literature on this topic.

**More diversity on the farm and on the plate: Look at overall productivity, instead of boosting output but harming society and the environment**

Agroecological systems are not just productive; they also protect natural resources and boost the resilience of farms against the consequences of climate change, such as extreme drought and heavy rains.<sup>3</sup> In a major study, Pretty et al. demonstrate that the overall productivity of agriculture in developing countries would rise by up to 80 % if agroecological production methods were used.<sup>4</sup>

Improvements in the food situation are often measured by looking at the quantity of food produced and the availability of calories. Policies and regulations still mainly promote approaches that boost output.<sup>5</sup> The assessment of agri-food systems typically ignores factors such as the quality of nutrition, access to food, maintaining ecosystems, or participation in decision-making. International experts, including the former UN Special Rapporteur on the Right to Food, Olivier de Schutter, increasingly say that the entire production process should be considered in the analysis of agroecosystems. Such a “full-cost accounting” would take into account all of the costs that arise in the agri-food system, from environmental effects to the social participation of growers. Sustainable systems should be promoted preferentially by agricultural and food policies.

<sup>3</sup> Various IPES 2016 studies: Folke et al., 2002; Holt-Giménez, 2002; IAASTD, 2009; Lin, 2011; Tirado & Cotter, 2010; Rosset et al., 2011; Pretty et al., 2011; Mijatović et al., 2013; Altieri et al., 2015; Rodale Institute, 2015

<sup>4</sup> See Pretty et al., 2006. This analysed 286 projects on three continents. <https://pubs.acs.org/doi/abs/10.1021/es051670d>

<sup>5</sup> Among others, Duncan, 2015: Global food security governance: Civil society engagement in the reformed Committee on World Food Security.

## **Agroecology as an alternative to industrial farming**

Agroecology is an approach that is firmly based in science and is founded on ecological principles, the political approach of food sovereignty,<sup>6</sup> and the right to adequate food. Despite limited institutional support, it is practised and has been further developed by farming communities worldwide, and is being promoted by social movements around the globe. The idea of agroecology has gained credibility and widespread recognition through the work of the international peasant movement “La Via Campesina” and since 2007 through the Nyéléni Process.<sup>7</sup>

Agroecology aims for a socially just and ecologically sustainable transformation of the agri-food system – one in which peasants, workers and consumers are at the centre of decisions. The concept is founded on the basic principles of ecological agriculture: maintaining soil fertility; a cycle that includes soil, plants, animals and people; and the farm’s independence from external inputs. Taken together, the principles commit agroecology to agricultural production and food production that are thoroughly ecological and socially sustainable.

Agroecology is the alternative to industrial farming. It strengthens family

farms and guarantees good jobs in the countryside. But the process of transformation from conventional to agroecological production is multifaceted as agroecosystems are very varied and complex. That means there is no single, simple way forward that can be used in every situation. Such transformations require a bottom-up approach, one in which local people, rural producers, processors and marketers themselves shape the changes, rather than having them dictated from above by governments, companies or international organizations.

<sup>6</sup> In the mid-1990s, the idea of food sovereignty was developed, mainly by La Via Campesina. The starting point for food sovereignty is the right of all to determine their own agricultural and food policies. It should be possible for everyone to feed him- or herself in dignity, according to his or her own economic, social, cultural and ecological situation, and without destroying the food and livelihoods of coming generations.

<sup>7</sup> Nyéléni is a worldwide movement for food sovereignty that originated in the countries of the global South. At the International Forum for Agroecology in 2015 in Mali, it agreed to a common understanding of agroecology. See [www.foodsovereignty.org/wp-content/uploads/2015/02/Download-declaration-Agroecology-Nyeleni-2015.pdf](http://www.foodsovereignty.org/wp-content/uploads/2015/02/Download-declaration-Agroecology-Nyeleni-2015.pdf)

# Exploiting the potential of agroecology

Agroecology develops solutions for many of the social and ecological problems in agri-food systems at a time of climate crisis. It is based on the following co-equal elements.<sup>8</sup>

## 1. More diversity above and below ground

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Agroecology systematically includes biodiversity in production systems and respects biological processes. The soil, plants and animals are regarded as parts of an ecosystem, and knowledge about them plays a key role. Diverse crop rotations and continuous soil cover by wild plants and catch crops nurture soil life, promote the development of humus, and hinder soil degradation.

## 2. Greater resilience and adaptation to the climate crisis

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Diversified cultivation systems make peasants more able to withstand external shocks such as extreme weather events and volatile prices. Agroecological systems improve water uptake and retention in the soil. Crop roots can penetrate more deeply, and the pressure of pests and diseases is reduced.

Agroecology protects the climate by increasing carbon sequestration (which improves soil health and enables depleted soils to recover) and cutting energy use (lowering greenhouse-gas emissions). Integrated crop-livestock systems promote soil fertility, close nutrient cycles, and make use of plant residues.

## 3. Strengthening the agroecosystem's capacity for self-regulation

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The more biodiversity, the lower the risk of pests and diseases. Conversely, pesticide use harms biodiversity by reducing the number and range of plants, insects and other organisms in and above the soil. Spraying increases dependence on external inputs. Agroecology, on the other hand, strengthens the natural checks and balances in the system and breaks the vicious cycle of pesticide use leading to resistance, requiring the application of yet more pesticides.

## 4. More control over livelihoods

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To maintain natural resources and ecosystems, peasants, herders, indigenous groups and rural communities must have the right to and control over land, seed, water, biodiversity and knowledge. Collective forms of ownership and management must be recognized and protected.

## 5. Strengthening family farms

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Diversifying farm enterprises and production systems, and integrating them into local or regional processing and marketing networks, will conserve family farms, create jobs and strengthen regional economic cycles. Diversifying production reduces peasants' exposure to market-related risks such as price fluctuations, which are on the increase because of climate crisis.

## 6. Healthy nutrition and producing food locally

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Shorter distances and closer ties between rural and urban areas can bring peasants closer to both small-scale food processors and consumers. Shorter transport distances reduce the emission of greenhouse gases. Markets that reward producers with fair prices and that provide a wide range of foodstuffs promote a local supply of diverse, fresh and healthy food.

## 7. Less dependence, more autonomy

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Agroecology increases producers' autonomy. Being the weakest link in current food value chains, peasants have little power to oppose the market dominance of corporations. Agroecology creates a livelihood for family farms, helps strengthen local markets, economy and employment, and responds to local demand.

## 8. Equal rights for women and men

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Solidarity between women and men depends on equal rights, freedom from violence, and equal development opportunities. Equal control over productive resources, equal access to education and agroecological advice, and equal say in households, organizations and political processes: all these are a vital part of agroecology. Negative social norms and gender stereotypes must be overcome.

## 9. Greater participation and voice in decision-making

Agroecology promotes forms of social organization that are a prerequisite for shaping the agri-food system. It stimulates people to get organized and work together in groups and networks at various levels, from local to global. Peasant organizations, consumer associations and other civil society actors gain the possibility to influence programmes and policies at an early stage.

## 10. Policies and participatory research

To exploit the promise of agroecology, political and administrative support is required, along with appropriate policy frameworks – for example to promote community catering (e.g. school feeding), develop local market infrastructure, and support local and regional diversification. To be effective, policies in different fields must be mutually coherent.

Agroecological research builds on the knowledge of breeders, peasants and small-scale processors. They must jointly guide research activities. A focus for economic research should be the solidarity-based economy.

<sup>8</sup> The elements are based on various key frameworks for agroecology, including the Nyéléni Declaration (2007), the SOCLA Criteria (2014), the Nyéléni Declaration on Agroecology (2015), the CIDSE Principles of Agroecology (2018) and FAO's 10 elements of agroecology (2018).

## Promoting agroecology: Examples from around the world

**Brazil:** The National Policy for Agroecology and Organic Agriculture (PNAPO) of previous Brazilian governments is the result of intensive engagement with civil society. PNAPO is a unique framework policy at the federal level to promote agroecology and organic farming. It includes seven comprehensive guidelines. Over €364 million have so far been invested, resulting in significant improvements for small-scale farmers and other disadvantaged groups in Brazil. PNAPO has funded agroecological extension services, built 143,000 water cisterns, and supported 5,300 communities to allocate at least 30% of their school meal budget to purchase regional, organic and agroecological products from family farms. The fate of this programme under the new, right-wing Bolsonaro administration is unclear.

**Germany:** In northern Germany, the Landwege Producer-Consumer Association, founded in 1988, is making a major contribution to promoting organic agriculture. It helps maintain production systems and create jobs within a 100 km radius of the city of Lübeck. Regional value chains ensure fair and direct trade. The association now includes 30 organic farms, over 800 members and more than 100 workers. Landwege supports social projects and makes a major contribution to education on sustainable development.

**France:** The city of Rennes promotes the supply of locally produced organic food. It supports, for example, the development of urban gardens, the establishment of solidarity agricultural projects, cooperative grocery stores, and the creation of open-air evening markets. It offers financial support for such initiatives, provides locations where subscribers can pick up boxes of vegetables, and conducts information campaigns. City planners consider the need to maintain farmland near the city, and promote more intensive links between the city and its surroundings. The Rennes Metropolitan Region has drawn up a local master plan for agriculture.

**India:** The state of Sikkim has implemented a consistent policy to convert its agriculture completely to certified organic production. In total, 66,000 family enterprises cultivate 75,000 hectares in the state. In 2018, Sikkim received the Future Policy Award for strengthening agroecology. Particularly noteworthy is the state's step-by-step ban on synthetic fertilizers and pesticides. But the transformation goes far beyond organic production and has pushed Sikkim and its inhabitants towards a more sustainable future. Socioeconomic aspects such as consumption and growth, cultural elements, as well as health, education, rural development and sustainable tourism also play a central role in the law.

# ***Demands for the German government***

Agroecology makes it possible to achieve many of the global Sustainable Development Goals. Policy frameworks at various levels have hitherto hindered a move towards agroecological approaches; these include policies on agriculture, nutrition, trade, bioeconomy, seeds and patents. Agroecology also plays only a marginal role in official development assistance.

**The organizations supporting this position paper call on the German government to undertake the following actions in support of agroecology.**

## **1. Political framework**

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- The federal government should make a clear commitment to agroecology. It should publish a statement that describes and recognizes the potential of agroecology to create environmentally and socially compatible agri-food systems, as well as committing itself to the step-by-step implementation of agroecological components.
- That also includes an end to harmful policies. For example, the government should ban the use of agrochemicals that are harmful to health, such as glyphosate.

- The government should submit a progress report on this every two years. This report should list progress and challenges in the implementation of programmes as well as in the coherence of policy areas such as agriculture, trade and energy.

## **2. Development cooperation**

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- In official development cooperation, agroecology should become a central concept to combat rural poverty. It should be systematically integrated and firmly anchored in the revision of rural development strategies. An international advisory board could assist the Federal Ministry of Economic Cooperation to do this. Such a board should be provided with a budget for independent studies and other publications.
- In its international work, the government must advocate for the promotion of agroecology and should promote the establishment of an “agroecological donor alliance”. It should press for the reorientation of European Union development policies towards agroecology.
- The Federal Ministry for Economic Cooperation should commission a study based on the methodology of Pimbert and Moeller to examine agricultural projects supported by the Ministry since 2013. The study should analyse the application of the agroecological elements listed above, and indicate how these elements can be more strongly integrated and supported in development cooperation.

- The government should withdraw from funding initiatives and projects such as the Alliance for a Green Revolution in Africa (AGRA), whose approaches are diametrically opposed to the concept of agroecology.
- For the period 2019 to 2021, the government should make €300 million available to promote agroecology nationally and internationally. Of this, €200 million should be allocated to FAO’s Scaling Up Agroecology Initiative, and €100 million should be earmarked for a support programme on agroecology and women to specifically support the work of women’s organizations.

## **3. Research and extension**

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- The government must gear research and advisory services to the precautionary principle. It should use the principle of co-creating knowledge as a basis for both science (farmer-led research) and advisory services for agricultural production and artisanal food processing, for example through agroecology schools or horizontal knowledge exchange (farmer-to-farmer extension).
- Research and examples of best practices from civil society organizations in the global South should be integrated into research activities conducted by publicly financed scientific institutions, including the Consultative Group on International Agricultural Research (CGIAR). The CGIAR system should be



reoriented towards agroecology. Civil society organizations, especially in the global South, should be represented in the decision-making bodies of publicly funded research institutions.

- Support for agroecology must be massively increased in research programmes. Transdisciplinary research should be significantly increased and long-term studies should be financed to investigate the effects of agroecological systems.

#### 4. Climate and agriculture

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- The government should work within the EU framework to ensure that the positive effects of agroecology on cutting greenhouse gas emissions, climate adaptation and the protection of natural carbon sinks are given special attention in the policy recommendations of the new work programme of the UN Framework Convention on Climate Change on agriculture and food security. Transformative agroecological approaches must be clearly distinguished from “climate-smart” agriculture, which continues to rely on synthetic fertilizer, pesticide and genetic engineering, so essentially continuing models of industrial farming.
- The government should devote more climate funds for agriculture to agroecology, and especially to research.

#### 5. European Union

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- The German government should advocate for agroecology to be a central part of the upcoming reform of the Common Agricultural Policy. Instead of supporting industrial agriculture models, the Common Agricultural Policy should promote animal husbandry that is appropriate for each species, foster the conversion of arable farming (more crop rotations, growing of legumes, diversify landscape such as with trees and hedgerows), and effectively contribute to environmental, animal protection and climate goals. Flat-rate area payments should be replaced completely by targeted payments for services provided by peasants to society. The focus should be more on small and medium enterprises and on diversified farms.
- Regional economic cycles, regional enterprises and local marketing networks of family farms should be strengthened by appropriate instruments and regulations. Targeted investments through the Common Agricultural Policy should be made in local marketing networks. The EU’s agricultural policies that have many negative effects on local markets in the global South must be ended as has been done with export subsidies.
- Ministries responsible for the environment, animal protection, health, nutrition and international development should be involved in revising the Common Agricultural Policy at EU, member states and where appropriate, regional level. The involvement of all relevant civil society actors should be ensured in line with the partnership principle.

#### 6. United Nations Committee on World Food Security

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- In 2019, agroecology is on the agenda of the UN Committee on World Food Security (CFS). The German government must work to ensure that especially those whose rights are not respected and who are routinely excluded from decision-making processes are fully involved. That includes consultations on the report of the High Level Panel of Experts on Food Security and Nutrition (HLPE), as well as negotiations on the draft decision in the CFS working groups and plenary.
- The government should advocate for the HLPE report to consider the following elements: agroecology should be regarded as science, practice and social movement. Each component is equally important. The view of agroecology as a holistic and systematic approach should be considered in the CFS. A human rights perspective is vital for this. Special attention should be paid to small-scale producers and their knowledge systems.
- The German government should also press for the HLPE report to include policy recommendations to guide states in the introduction and implementation of agroecological policies.

## Further reading

**CIDSE (2018): The principles of agroecology. Towards just, resilient and sustainable food systems.**  
<https://www.cidse.org/publications/just-food/food-and-climate/the-principles-of-agroecology.html>

**Colin, A., Pimbert, M. und C. Kiss (2015): Building, defending and strengthening agroecology, a global struggle for food sovereignty.**  
<https://pureportal.coventry.ac.uk/en/publications/building-defending-and-strengthening-agroecology-a-global-struggl-2>

**Declaration of the international forum for agroecology – Nyéléni, Mali – 27 February 2015.**  
<http://www.foodsovereignty.org/wp-content/uploads/2015/02/Download-declaration-Agroecology-Nyeleni-2015.pdf>

**FAO (2018): The 10 elements of agroecology. Guiding the transition to sustainable food and agricultural systems.**  
<http://www.fao.org/3/I9037EN/i9037en.pdf>

**FIAN Österreich (2017): Mit Agrarökologie für das Recht auf Nahrung.**  
[https://fianat-live-7318544636224c40bb0b0af5b09-745b6a8.divio-media.net/filer\\_public/1b/0a/1b0a427c-ff8c-4aa4-8657-85f6d-56f38ee/mit-agraroekologie-fuer-das-recht-auf-nahrung.pdf](https://fianat-live-7318544636224c40bb0b0af5b09-745b6a8.divio-media.net/filer_public/1b/0a/1b0a427c-ff8c-4aa4-8657-85f6d-56f38ee/mit-agraroekologie-fuer-das-recht-auf-nahrung.pdf)

**Forum Umwelt und Entwicklung et al. (2016): Besser anders, anders besser. Mit Agrarökologie die Ernährungswende gestalten.**  
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**Friends of the Earth International (2018): Agroecology: innovating for sustainable food systems and agriculture.**  
<https://www.foei.org/resources/publications/agroecology-innovating-for-sustainable-food-systems-and-agriculture>

**Holt-Giménez, E. und M. Altieri (2012): We already grow enough food for 10 billion people ... and still can't end hunger.**

**IPES-Food (2016): From uniformity to diversity: A paradigm shift from industrial agriculture to diversified agroecological systems.**  
[http://www.ipes-food.org/\\_img/upload/files/UniformityToDiversity\\_FULLL.pdf](http://www.ipes-food.org/_img/upload/files/UniformityToDiversity_FULLL.pdf)

**SOCCLA (2014): Agroecology: concepts, principles and applications.**  
<https://www.socla.co/wp-content/uploads/2014/socla-contribution-to-FAO.pdf>

**Wezel, A. et al. (2009): Agroecology as a science, a movement and a practice. A review.**

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