JustTransitions

FACT SHEET 06

Towards a just and climate-resilient food system: agroecology for food sovereignty and climate justice

Deep and fundamental transformation is needed to cut emissions and build climate resilience in the food system. A range of climate mitigation and adaptation solutions are being promoted, which should be assessed for their contribution to the social, ecological and economic transformation needed for a just transition of South Africa's food system.

A range of false solutions are being pushed. They want us to believe the lie that all that is needed are a few tweaks to the existing system.

The increasing influence of corporations in global and national policy spaces is resulting in support for a number of false climate change solutions, which distract from the systemic transformation that is needed. These false solutions at best tweak aspects of the food system, but more often reinforce existing patterns of power and inequality by reproducing and 'greenwashing' the same thinking and systems that are the cause of the intersecting crises we face.

Examples of false solutions include:

- Technological fixes aimed at maintaining productivity (as well as control and profits) within the industrial approach – for example, genetically modified seed including those falsely promising drought tolerance and extra nutrition,[1] precision planting, digitalisation and big data. Agri-business has also used climate smart agriculture (CSA) to greenwash the introduction of industrial inputs to smallholder farmers using climate adaptation funding. These techno-fixes continue to ignore the complex interconnections of living systems, focusing on narrow aspects of production.
- Allowing the private sector to shape transition pathways through public-private partnerships that contribute public funds to private sector agendas.
- Multi-stakeholder processes with no mechanisms for accountability or mitigating power imbalances.
- Financialisaton of issues where private sector finance cherry picks solutions with market benefits over societal and ecological needs.

1. Genetically modified organisms (GMOs) further lock farmers into industrial inputs that pollute water and soil, destroy biodiversity and damage the climate. GMOs cannot solve complex problems such as the many factors influencing how a plant responds to drought. Also, the specific gene for drought tolerance approved in South Africa has been shown to be ineffective. Likewise, adequate nutrition is achieved through increasing the diversity of healthy food people eat, not through a gene that increases one nutrient in an unpredictable way in a dynamic living environment.

Building climate resilience in the food system for a just transition means a transformative resilience that addresses the roots of vulnerability and tackles the systems and power relations that need changing.

There are three key tasks for building climate resilience in the food system for a just transition:

1. Reduce emissions across the food system (mitigation)
2. Make food production and distribution more climate resilient (adaptation)
3. Meet social and nutritional needs

This means we need to work towards systemic transformation of the food system that addresses the roots of vulnerability and tackles the systems and power relations that need changing, instead of a shallow approach that props up existing systems and puts the onus on households and workers to create resilience by adapting to conditions they have little fault in creating.

To achieve this resilience, the current food system needs to be deeply transformed towards agroecology, where land and agrarian reform are opportunities for climate justice, ecosystem restoration and food sovereignty.[2]

2. Food Sovereignty is the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems.

What is **agroecology?**

Agroecology learns from nature and applies this learning to the way we produce food and to create just, sustainable and resilient food systems.

Agroecology is a bottom-up approach rooted in the experiences of millions of smallholders and family food producers around the globe who have been fishing, growing crops, herding livestock, and harvesting uncultivated food from their territories over generations. They have carefully observed their environments and have adapted their food production practices to their specific contexts.

Because the local landscape, soils, climate and socio-economic conditions, as well as the culture in each place are unique and different, the way agroecology is practised cannot be the same everywhere. Agroecology applies common principles from sustainable systems to the local context, resulting in different practices and solutions on the ground around the world.

The science of ecology looks at the relationships between living organisms (including humans) and their environment. Agroecology thus applies the science of ecology to agriculture and food systems, bringing together the wisdom and traditional knowledge of food producers with that of researchers in diverse disciplines who are deepening our understanding of how natural living systems work.

Agroecology connects grassroots communities, activists, researchers, scientists, workers and consumers in a global movement working towards food sovereignty. Together we work on the social, political and economic changes needed to transform the current food system to ensure human rights, including the right of people to eat and produce healthy and culturally appropriate food, produced and harvested through ecologically sound and sustainable methods.

This requires us to challenge and transform deep inequalities of power in society to return the control of seeds, biodiversity, land and territories, waters, knowledge, culture and the commons to indigenous peoples and the family-farmers and smallholder producers who feed most people in the world.

Agroecology resists the dominant corporate trade and industrialised food system and instead promotes circular and solidarity economies through localised and territorial markets based on transparent networks between producers and consumers. This solidarity economy values mutual cooperation, fairness, and social and economic democratisation to support the wellbeing of people and the planet above profit.

Respecting the contribution of women and youth to food systems and their right to actively participate in all aspects of decision-making is fundamental to this approach.

Agroecology for **climate resilience**

Agroecology builds climate resilience in the food system through:

- Nourishing communities with fresh, highly nutritious, and poison-free food that is locally accessible and affordable.
- Emphasising reciprocity and participatory approaches, building from local knowledge and linking with scientific innovations that strengthen community relationships and ability to respond to challenges with locally relevant solutions.
- Connecting producers, consumers and their local environment. Locally-produced and indigenous foods are more likely to be locally adapted, and therefore resilient, appropriate and supportive of the ecology and culture of that place, leading to resilience to climate change and other stressors such as increased disease or pests.
- Focusing on local and regional markets and exchange, which avoids the need for energy guzzling transport, packaging, processing and refrigeration. Production for more local consumption also means that food can be more easily processed with locally available, smaller scale, affordable and appropriate technologies.
- Using and building local natural resources that are free and accessible to producers, which promotes self-sufficiency and helps save money for use in times of crises, instead of creating debt. It avoids using chemical pesticides and fertilisers, which damage soils, pollute the environment (especially scarce water resources), and release greenhouse gases during their energy intensive manufacture and off-gassing in the field.
- Production practices that support the living processes between organic matter, microbes and plants to improve the health, structure and nutrition available in soils. These living soils avoid compaction that creates water run-off and erosion and are better able to hold water and soil carbon.
- Practices that conserve water by increasing infiltration and holding water for longer, including creating water retention structures, increasing plant diversity and cover, mulching, and preparing soils that are deeply fertile and full of living organisms. This helps to absorb and reduce the force of flood waters, but also provides moisture for crops and soil life which can then survive through longer periods without rain.
- Building on local and traditional knowledge and inheritance, including locally adapted but genetically diverse seeds and breeds of animals that are more resilient to climatic variations and disease.
- Valuing natural ecosystems as part of food and livelihood systems. These are conserved and provide landscape-level resilience to extreme weather and other climatic shocks.

Agroecology principles for food systems transition

In the last 10-15 years, agroecology has gained support internationally, including within the UN Food and Agricultural Organisation (FAO), and more recently as a work programme within the Committee for World Food Security (CFS). The High Level Panel of Experts on Food and Nutrition (HLPE), an independent scientific body providing evidence-based research to the CFS, compared innovative approaches contributing to sustainable food systems. It found that agroecological approaches are more transformative than those focused on 'sustainable intensification',[3] contributing substantially to the access and utilisation of food, as well as social equity and responsibility. The HLPE distilled 13 principles from the global practice and science of agroecology that are applied to food systems transition. Some of these apply at the level of the farm and agroecosystem, others to the broader food system, and some can be applied at all levels.

3. Sustainable intensification is an approach using innovations to increase productivity /yields on existing agricultural land without adverse environmental impacts, but without necessarily changing the structure or ownership of production.

These align well with three core elements that practitioners and advocate organisations in South Africa have identified as essential to agroecology, namely:

Core element	HLPE 13 principles
Environmental sustainability	Recycling, input reduction, soil health, animal health, biodiversity, land and natural resource governance, synergy (production)
Social justice and redress	Co-creation of knowledge (embracing local knowledge and global science), social values and diets, participation
Economic fairness and participation	Economic diversification, fairness, connectivity, synergy (economic)

The climate crisis is not only an emergency to be confronted, but an opportunity to build agroecological food systems that are just, that nourish people, protect the ecosystems that sustain us, and build food sovereignty.

References

This factsheet draws on the Biowatch Factsheet: Climate change and the industrialised food system.
See: https://biowatch.org.za/download/factsheet-climate-change-and-food/

Additional references include:

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.