

2022 Désertif'actions

Agroecology to ensure food and nutritional security

Food security in drylands

Nearly two billion people suffer from micronutrient deficiencies, 159 million children under the age of five are chronically malnourished, 50 million are acutely malnourished. Conversely, two billion people are obese. According to the FAO, chronic malnutrition has been declining since the 2000s, unevenly across the world, but climate change could soon reverse the trend and push more than 25 million additional children into undernourishment by 2050.

The example of Burkina Faso

In Burkina Faso, 470,000 hectares of degraded land lose nutrients and are subject to erosion every year. 16.4% of the Burkinabe population was undernourished in 2019. Population growth is increasing food needs in areas already affected by declining yields, degradation of natural resources and significant damage from pesticides. The food security situation is increasingly deteriorating and is accentuated by the security and health context. The abusive use of chemicals has led to cases of food poisoning and pollution of water sources. The emergence of new economic needs (processing, industries, animal feed, etc.) is putting pressure on foodstuffs and causing competition with human food.

A primary cause of malnutrition is the gap between nutritional requirements and actual intake. These nutrients are naturally provided by food, whether freshly harvested or processed. According to IPES Food, the industrialised food system promotes the availability of cheap, energy-rich but nutritionally poor processed foods (also known as "empty calories") and tends to sustain malnutrition.

According to international nutrition organisations (including Action Against Hunger), the most comprehensive and integrated approach to ensuring adequate micronutrient intake is to diversify food production and consumption.

The example of Mali

In Mali, food and nutrition insecurity is exacerbated by a combination of biophysical and agro-climatic shocks affecting crops and livestock (successive droughts, floods, locust invasions, epizootics, etc.). Economic shocks such as rising prices on national and regional markets affect households, significantly increasing their level of vulnerability to food and nutrition insecurity while greatly reducing their resilience. As the pressure for food production increases, the size of landholdings shrinks, despite the use of mineral fertilisers which leads to significant soil degradation and biodiversity erosion. Finally, traditional organic methods are not encouraged by the authorities, resulting in agricultural yields that are far below the world average.



Agroecology as a response to food security issues

In the face of food and nutrition insecurity, agroecology is relevant. The arguments below explain why. They were developed during the national workshops and during the international webinar Désertif'actions.

Quality - nutrition - health

By improving the diversity of production and the nutritional content of food, agroecology increases the availability of nutritious food at the household and market level, thereby enhancing food and nutritional security.

- ⇒ Agroecological techniques allow for a **longer shelf life** of products compared to conventional products and provide a better nutritional quality contributing to the fight against malnutrition;
- ⇒ Combining crops improves the **dietary diversity** of communities;
- ⇒ Cultivation of legumes (soya, beans, moringa, pigeon peas, etc.) with a **high nutritional value** helps to reduce malnutrition, particularly among children;
- ⇒ Agroecology contributes to the **financial empowerment of women**: this improvement in their financial conditions ensures better food security, particularly for children;
- ⇒ Environmental **education for children** is very important to enable future generations to be aware of their environment, and their food.

Preservation of resources

Agro-ecological and regenerative methods are particularly well suited to small-scale food producers, who rely on low-tech, labour-intensive practices.

- ⇒ Natural soil fertilisation (use of legumes in association or rotation, application of organic manure and compost, etc.) contributes to **increased agricultural productivity**;
- ⇒ It facilitates **better management of water resources**;
- ⇒ Through the process of **soil restoration and conservation**, the risk of conflicts over access to land is reduced;
- ⇒ The issue of **access to land** is crucial to enable both male and female farmers to invest in improving certain plots of land and to take more responsibility for their preservation and improvement.



Short circuits - self-sufficiency

Smallholders produce 80% of the food in developing countries. According to the UNCCD, they are the essential source of the diversity of diets that ensure food and nutritional security for local communities. According to the IPCC, agro-ecological intensification in sub-Saharan Africa can address the challenges of employment and food security.

- ⇒ It follows a participatory process that involves rigorous control of production, guaranteeing the **sanitary quality** of the products and thus safeguarding the health of consumers;
- ⇒ Agroecology facilitates the connection between producers and consumers and thus contributes to respecting the **right to food**;
- ⇒ The establishment of agricultural land reserves in urban areas makes it possible to create **short supply circuits** which have an impact on the price of products;
- ⇒ Agroecology helps to ensure **seed independence** for farmers;
- ⇒ Agroecology allows people to produce what they need in the territory, and to ensure better **food sovereignty**;
- ⇒ Agroecology favours the labelling of products to develop the **market for organic products** from agroecology;
- ⇒ The planting of indigenous fruit tree species with different phenologies ensures a **supply in the low season**;
- ⇒ Crop diversification through agroecology allows farmers to **diversify their sources of income**, while diversifying the products available on the market (and those for self-consumption);
- ⇒ Agroecology allows for a **more rational use of water**, through the use of varieties adapted to the climate (irrigation water is however necessary to ensure continuous production and better cope with climatic hazards).



Recommendations to states and donors

In order to place agroecology at the heart of initiatives to transform agricultural and food systems, civil society organisations meeting in Abidjan for the UNCCD COP15 make the following recommendations to States and donors:

- **Recognise and promote access to land as a fundamental right of small-scale family farmers and pastoralists;**
- **Support access to organic production inputs (fertilisers, biopesticides), as well as to quality equipment;**
- **Support access to agricultural land for women and young people, particularly in urban and peri-urban areas, to help meet the food needs of urban populations;**
- **Deploy transport and communication infrastructure to open up agricultural production areas;**
- **Continue research on agroecological practices in partnership with civil society and producer organisations, in order to learn from local knowledge;**
- **Integrate agroecology into the training curricula of agricultural technicians and engineers.**

