AGROECOLOGY & BIODIVERSITY

Context

The diversity of life is declining globally at a rate unprecedented in human history, according to the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES). Approximately 1 million living species are threatened, and the erosion of populations is occurring at a rate 100 to 1,000 times higher than previous extinction processes.The IPBES considers combating land degradation as a priority to protect biodiversity and ecosystem services that are fundamental to all life on Earth in relation to sustainable development goals. In drylands, this would not only secure the future of ecosystems, but also the sustainable development of human societies that depend heavily on them. Agroecology has many assets to reduce biodiversity losses but also to develop an efficient agriculture in drylands.

Factors of biodiversity loss: pressures and threats

- The strong anthropic pressure through the unsustainable use of ecosystems: deforestation and land clearing;
- The use of chemical inputs and phytosanitary products causing the decline of crop pollinators and other animals that maintain the diversity of ecosystems, also causing the emergence of chronic diseases in populations and impact on water quality, especially drinking water;
- Intensification and excessive tillage of the soil which disrupts and destroys the soil fauna;
- The development of specialized monocultures, using improved genetic resources and abandoning varieties and breeds that are sometimes less productive but adapted to the climatic conditions.

Arguments from the field

To combat the degradation of biodiversity, agroecology shows major assets, some of which have been identified from initiatives and field experiences and are shared here.

Agroecology favors adapted agricultural resources

- The building of national and sub-regional networks for the protection of genetic heritage and the preservation of associated knowledge to preserve these heritage resources;
- The production and use of local varieties (farmers' seeds) and endangered breeds in agroecological systems, to preserve the capacity for adaptation of these systems.

Agroecology helps preserve soil biodiversity

- Compost production, cover cropping and other practices to increase functional biodiversity and soil fertility;
- Agroforestry integrating, for example, cereals, arboriculture, and livestock (structural diversity) in order to provide a variety of ecosystem functions (functional diversity), including those closely linked to the soil.

Agroecology preserves spontaneous fauna and flora

- Ecological intensification on agricultural plots to limit the clearing of natural wildlife habitat areas;
- The inclusion of living hedges, the inclusion of trees and shrubs in the farms and other grassy strips to promote the movement of fauna and flora.

Agroecology allows the valorization of a diversity of products

- Crop diversification and rotation on farms provides a diversity of production and facilitates producers' access to markets;
- The promotion of local biodiversity during sales on local, national or international markets (labelling) in order to improve the added value of the products sold.

Messages from civil society

To facilitate the deployment of agroecology, all stakeholders must become aware of their capacities to bring change.

Donors and international organizations

- Facilitate access to funding for agroecological practices (grants and subsidies) to contribute to biodiversity conservation;
- Strengthen support for agroecology-based initiatives as an approach to achieving the Aichi Targets within the Rio environmental conventions (UNCCD, UNFCCC and UNCBD) and other international and regional organizations.

Governments

- To strengthen the autonomy of farmers to fight against GMOs by facilitating genetic biodiversity and the circulation of farmers' seeds;
- Encourage support for the development of biopesticides, organic inputs, and nature-based solutions.

Research and education

- Create gene banks for the preservation of native species;
- Integrate agroecology into university curricula and identify agroecology training centers for farmers.

AGROECOLOGY RIGHT NOW!

We target Sustainable Development Goals (SDGs) 3 and 15 (good health and well-being/life on land), while contributing to knowledge and development practices aimed at achieving SDGs 1, 2, 5, 6, 10, 12 and 13.