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ELEMENTS OF AGROECOLOGY

Farming with Nature, Not Against It

Agroecology is scientifically defined as the application of ecological concepts and principles to the design and management of sustainable agricultural ecosystems. It is an integrated, transdisciplinary science that encompasses not only the biophysical aspects of farming (soil, plants, animals) but also the social, economic, and political dimensions of food systems.

Explained in simple terms, Agroecology is a way of farming that works with nature instead of against it. It is a sustainable approach to producing food that treats a farm like a natural ecosystem, balancing the needs of people, soil, plants, animals, and the environment.



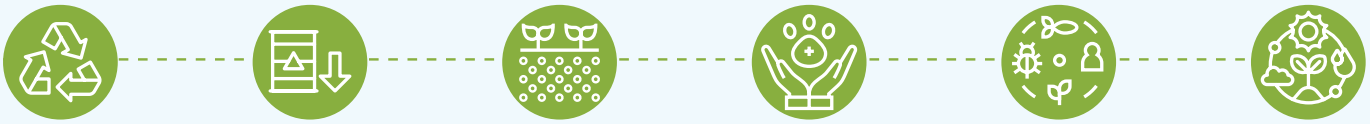
The Principles of Agroecology

ECOLOGICAL ECONOMIC SOCIAL & GOVERNANCE

Recycling
Reuse nutrients and organic matter. Preferentially use local renewable resources and close, as far as possible, resource cycles of nutrients and biomass.

Soil Health
Enhance soil health and function for better plant growth by managing organic matter and boosting biological activity to create fertile, living soil.

Biodiversity
Maintain and enhance functional, and genetic diversity, preserve biodiversity across agroecosystems over time, and at field and landscape scales.



Input Reduction
Reduce or eliminate dependency on purchased, chemical inputs.

Animal Health
Promote health and welfare of all creatures and natural systems; do not endanger them with your acts.

Synergies
Strengthen natural interactions- positive ecological interactions, synergy and integration among agroecosystem elements (plants, living things, trees, soil, water, crops) and people.

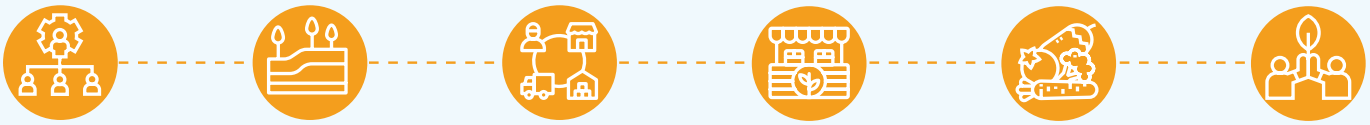
Economic Diversification
Diversify farm incomes (multiple income sources) to gain financial independence, add value, and respond to consumer demand.



Participation
Encourage organization, participation and decision-making by producers and consumers to support decentralized governance and adaptive local management.

Connectivity
Ensure producer–consumer trust by promoting fair, short supply chains and integrating food systems into local economies.

Social Values & Diets
Build food systems rooted in local culture, identity, tradition, and equity, providing healthy, diverse, and culturally, seasonally appropriate diets.



Land & Resource Governance
Recognize and support family farmers, smallholders, and pastoral communities as sustainable stewards of natural and genetic resources.

Fairness
Support dignified livelihoods for all food system actors, especially small producers, through fair trade, employment, and intellectual property rights.

Co-creation of Knowledge
Enhance co-creation and knowledge sharing among peers and community, including local and scientific innovation, through farmer-to-farmer exchange.

AGROECOLOGY = ECOLOGY + EQUITY + ECONOMY

A pathway to sustainable, resilient and holistic food systems.

References

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