The 10 Elements of Agroecology:
Guiding Transitions To Sustainable Food and Agricultural Systems
Agroecology

A polysemic concept with over 30 definitions adopted by government, Academia and CSOs (FAO website, AgroecologyLex)

Applies ecological concepts & principles to optimize interactions between plants, animals, humans and the environment while taking into consideration social aspects needed for a sustainable and fair food system

Highly knowledge-intensive, builds upon farmers’ collective knowledge & innovations (attractive for rural youth)
The 10 Elements of Agroecology: Harmonizing Principles and Levels

5 Agroecology principles (Altieri 1995)

5 Agroecology levels (Gliessman 2015)

Literature review, Feedback from International/FAO experts Global, Regional conferences

5 Sustainable Food and Agriculture principles (FAO 2014)

10 Elements of Agroecology
Purpose of the 10 Elements

• The 10 Elements seek to capture the most important agroecological principles/concepts to support countries to scale-up agroecology

• As a framework, the 10 Elements help to define FAO’s work on agroecology in an inclusive way, without privileging one definition, stakeholder group, or region

• By highlighting important agroecological principles and properties at farm and agro-ecosystem level, and within wider food systems, the 10 Elements point to different entry points for the work of FAO and partners to strengthen agroecology
The 10 Elements of Agroecology

- Myriad of interactions and interdependencies
- Common characteristics, foundational practices and innovation approaches
- Emerging properties
- Context features
- Enabling environment
Diversity

- Agroecological systems are highly diverse
- Optimize diversity (Crops, trees, animals)
  - Species
  - Varieties/Breeds
- Benefits
  - Production
  - Ecosystem services
  - Environmental
  - Socio-economic
  - Nutrition
  ➢ Resilience

Diversification is key to agroecological transitions to ensure food security and nutrition while conserving, protecting and enhancing natural resources.
Co-creation and sharing of knowledge

- Knowledge intensive
- Context-specific knowledge
- Participatory processes
  - Traditional/indigenous knowledge
  - Practical knowledge
  - Scientific knowledge
- Education (formal and non-formal)

Agricultural innovations respond better to local challenges when they are co-created through participatory processes.
Building synergies enhances key functions across food systems, supporting production and multiple ecosystem services.

Synergies

• Selectively combine:
  • Annual crops
  • Trees and perennial crops
  • Livestock
  • Aquatic animals
  • Soils
  • Water, etc.

• Synchronization in time and space
• Minimize trade-offs
Efficiency

- Output/Input
- Free/abundant natural resources
  - Solar radiation
  - Atmospheric carbon
  - Atmospheric nitrogen
- Recycling
- Use of external inputs ↓
  - Costs ↓
  - Environmental impacts ↓
  - Ecosystem services ↑
- Resilience ↑

Innovative agroecological practices produce more using less external resources.
Recycling

- Biological processes recycling
  - Nutrients
  - Biomass
  - Water
- Efficiency ↑
- Pollution ↓
- Farm and landscape scale

More recycling means agricultural production with lower economic and environmental costs.
Resilience

- Capacity to recover from disturbances

- Ecological resilience
  - Self-regulate pest outbreaks
  - Resistance to extreme weather

- Socio-economic resilience

- Diversification
- Integration
- External inputs ↓

Enhanced resilience of people, communities and ecosystems is key to sustainable food and agricultural systems.
Human and social values

• Core values
  • Dignity
  • Equality
  • Inclusion
  • Justice

• Producers/communities
  • Autonomy, adaptive capacities
  • Empowerment
  • Agents of change

• Gender equality
  • Decision making
  • Access to resources

• Rural youth
  • Decent agricultural jobs
    • Labor and knowledge intensive

Protecting and improving rural livelihoods, equity and social well-being is essential for sustainable food and agricultural systems.
Culture and food traditions

- Agriculture and food are core to human heritage
- Disconnection between food habits and culture
  - Obesity
  - Malnutrition
  - Hunger
- Re-balance tradition and modern food habits
- Source of inspiration for AE solutions

By supporting healthy, diversified and culturally appropriate diets, agroecology contributes to food security and nutrition while maintaining the health of ecosystems.
Responsible governance

Transparent, accountable, inclusive
  • Enabling environment
  • Producer’s empowerment

Examples:
  • School feeding
  • Procurement programs
  • Subsidies/payments for ESS
  • Branding agroecological produce
  • Access to land and natural resources
    • Justice
    • Long-term investments
Circular and solidarity economies that reconnect producers and consumers provide innovative solutions for living within our planetary boundaries while ensuring the social foundation for inclusive and sustainable development.

- Reconnect producers and costumers
  - Participatory guarantee systems
  - Local producer’s markets
  - Denomination of origin
  - Community supported agriculture
  - E-commerce etc.
- Income for producers ↑
- Fair prices for consumers
- Food waste ↓
- Energy use ↓
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