Principles of Agroecology

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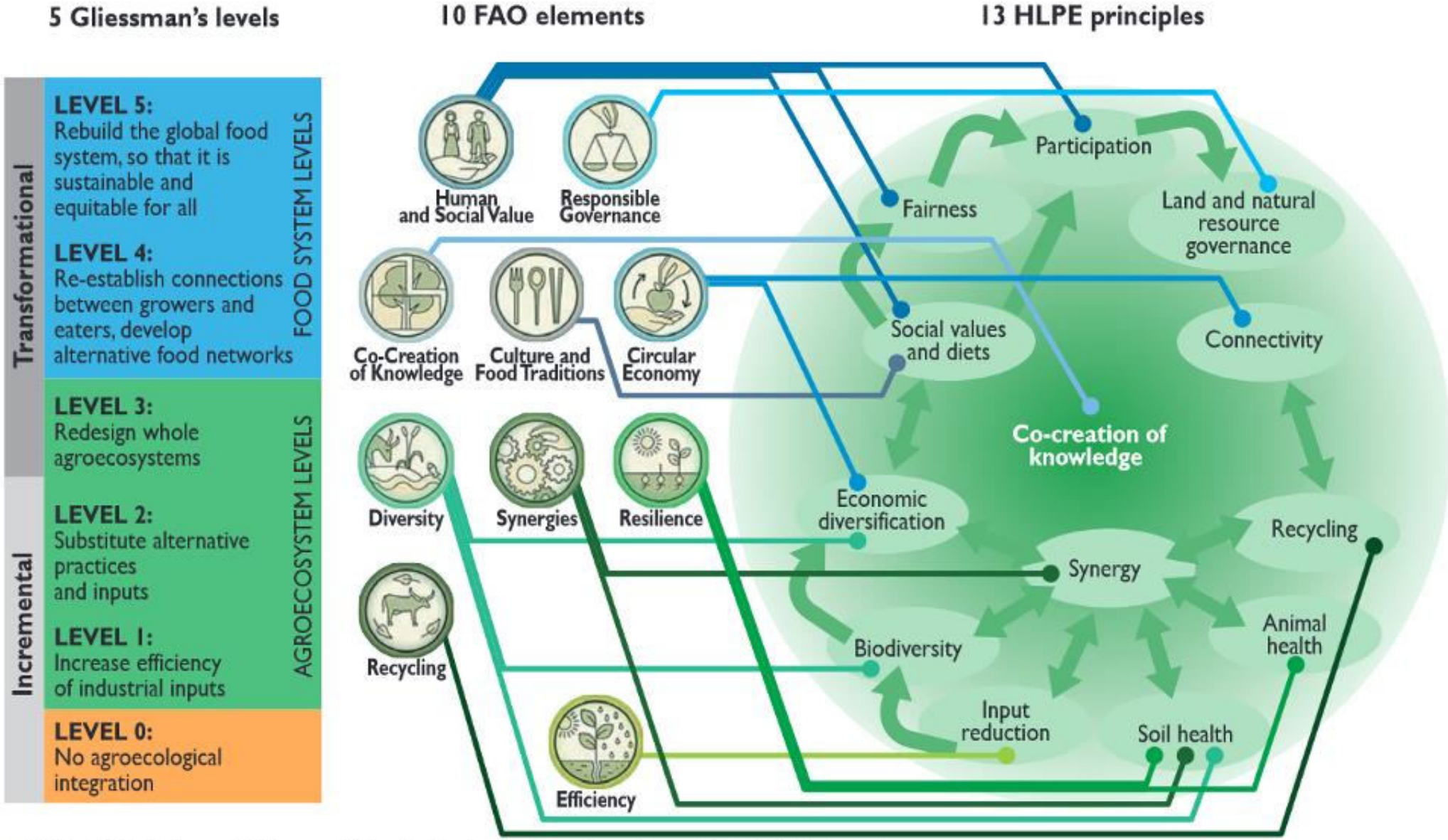
What is agroecology?

- There are many different definitions of Agroecology

https://www.agroecology-pool.org/agroecology/definitions/

- **According to FAO,** Agroecology is an integrated approach that simultaneously applies ecological and social concepts and principles to the design and management of food and agricultural systems. It seeks to optimize the interactions between plants, animals, humans and the environment while taking into consideration the social aspects that need to be addressed for a sustainable and fair food system
- **Agroecology offers a broad range of solutions:**
  - improve nutritional and food quality
  - increases incomes and creates employment
  - helps reduce risks for the environment and the health of populations



▲ *Linking FAO's 10 elements, Gliesmann's 5 levels of food system transformation and the 13 HLPE principles*

Diversity ⟷

- ✓**Biodiversity:** diversity of species, genetic, over time, space..
- ✓**Soil health**: organic manure and diversity of species
- ✓ **Economic diversification**: diversity of farm activities

Mixed-cropping

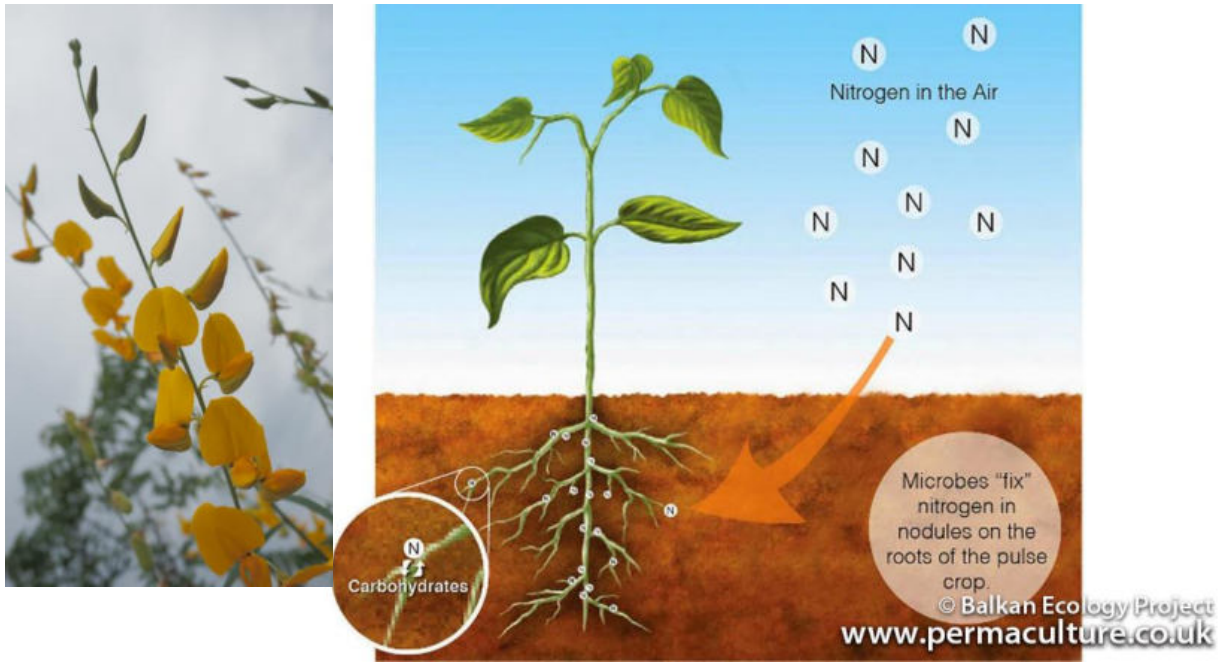
Use of local seed

Compost

Food-processing

Synergies

- **Synergy:** positive interaction amongst plants, animals, trees, soil, water...
- **Soil health:** organic manure and diversity of species



Cover crop: leguminous-soil-bacteria-crop

Agroforestry: crop-trees-soil-water

Efficiency

✓**Input reduction:** reduce or eliminate dependency on purchased inputs

Better use of natural resources, especially those that are free (i.e: renewable energy), and reduce costs.

Biogas use manure from cows that replaces coal or diesel

Farmers producing biofertilizer EM replaces chemical fertilizers/pesticides

Farmers saving seed replaces purchasing hybrid seed every year

Recycling ⟷ ✓**Recycling:** use local renewable resources and close cycles of nutrients and biomass

Use rice straw for natural mulch

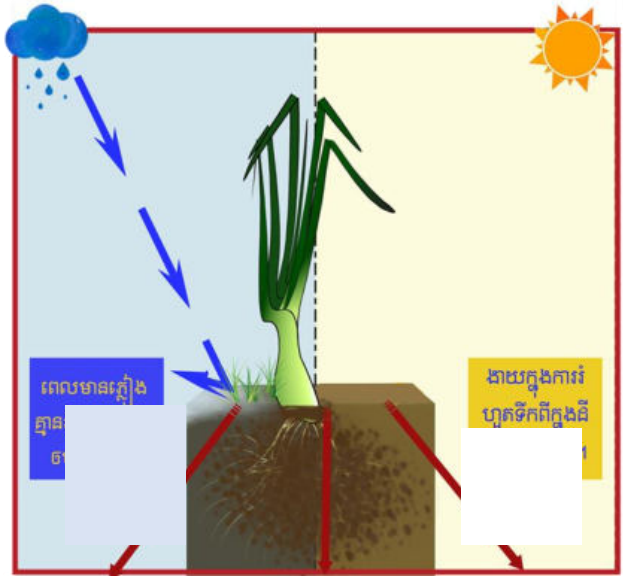
Use chicken manure as fertilizer

Resilience ⟷

✓**Soil health:** organic manure and diversity of species

✓**Animal welfare:** animal health

Improving soil health, animal welfare, biodiversity, economic diversification, and social cohesion improves the resilience of farms



Naked soil is less resilient to extreme weather

Animal welfare: appropriate housing, organic food, natural supplements, vaccination..

Co-creation of knowledge ⟷ **✓Co-creation of knowledge**

- *Blends indigenous knowledge, producers' and traders' know-how, and global scientific knowledge*
- *Context-specific, horizontal and participatory*

'Farmer to farmer'

Co-production of knowledge among multi-stakeholders networks

Culture and food traditions

✓**Social value and diets:** Build food systems based on the culture, identity, tradition, social and gender equity of local communities that provide healthy, diversified, seasonally and culturally appropriate diets.

Local varieties

Recipes, cultural heritage

Equal access to healthy food

Circular and solidarity economy

- *Zero waste: revalorization of farm sub-products*

✓**Connectivity:** proximity and trust between producers and **consumers** through promotion of fair and short distribution networks and by re-embedding food systems into local economies

✓**Economic diversification:** diversity of farm income-generating activities

PGS selling point: direct from producer to consumer

Labelling, denomination of origin..

Human and Social Values

- ✓**Fairness:** dignified livelihoods, especially small-scale food producers, based on fair trade, fair employment, and fair treatment of intellectual property rights
- ✓**Participation:** social organization and greater participation in decision-making by food producers and consumers to support **decentralized governance**.
- ✓**Social values and diets:** food systems based on the culture, identity, tradition, social and gender equity of local communities that provide healthy, diversified, seasonally and culturally appropriate diets.

Fair trade

Respect farmers' intellectual rights on seed

Community participation

Responsible Governance

- **Land and natural resource governance:** Recognize and support the needs and interests of family farmers, smallholders, and peasant food producers as sustainable managers and guardians of natural and genetic resources.

- *Transparent, accountable, and inclusive governance mechanisms*
- *Development of legislation, plans, programs…at local, national and regional level.*

School feeding and public procurement programs

Market regulations allowing for branding of differentiated agroecological produce

Subsidies and incentives for ecosystem services


Any questions?
THANKS!