Overview of socio-economic benefits from Agroecology in the context of climate change

Social lens

Fostered social aspects within the agriculture sector render livelihoods of stakeholders more resilient against direct and indirect climate shocks. Example aspects are amongst others: safety nets by communities, empowerment and self-determination, uphold of social principles like equity, inclusion, fairness and justice.

	Key effects of AE element	Adaptation or Resilience Benefits	Mitigation Benefits
Co-creation of Knowledge	• Knowledge generation is contextspecific • Combination of traditional and scientific knowledge • Innovative knowledge is generated through collaboration of actors with different expertise • Fostered peer to peer learning allows better access to knowledge	• Joint understanding of various actors about climate risks and the respective needs to adapt • Effective uptake of adaptation knowledge via peers • Locally adapted knowledge leads to effective and practicable solution • Sustained sensitization about adaptive strategies across generations	• knowledge about mitigation potential of production forms can lead to reduced emissions • example: residue burning, livestock or soil management, reuse of manure, avoidance or efficient use of synthetic fertilizer
Human and Social Values	• Ensured autonomy and adaptive capacities of individuals and communities • Fostered dignity, equity, inclusion and justice in livelihoods • Empowered women and youth capital (e.g. skills, knowledge, work opportunities, good health)	• Strengthened climate adaptive capacity through community based strategies, networks and resource management • Respect of social values and norms can foster solidarity in climate crisis situations • Empowerment of woman and youth can foster their socio-economic resilience and could abate social disintegration in crisis	• Empowerment, more autonomy or an enabling social environment can lead to (technical) innovations or behavior change that could entail emission reductions
Culture / Food Traditions	• Enhanced production and consumption of healthy food is fostered • Diversified nutrition is supported • Culinary and culturally diets and production forms are adopted	• Demand for diversified nutrition could foster resilience given the diversification of production required for this. • Healthy people might better adapt to socio-economic changes from climate impacts and are physically more resilient to food shortages	• Consumption of locally produced food reduces emission from food transportation and storage

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Economic lens

Independence from inputs provision, access to functioning markets, financial safeguards and reserves, and sustainable economic models foster the climate resilience of farmers and other stakeholders while avoiding emissions through efficient production and recycling.

	Key effects of AE elements	Adaptation or Resilience Benefits	Mitigation Benefits
Diversity	• Enhanced diversification in produce, types of business models or resource management approaches	• Enhanced variety of income sources, sales markets, products or types of processing could stabilize financial robustness and thus resilience in crisis • Crop and animal diversity as well as temporal and spatial heterogeneity hedges against climate losses from individual events	• Changes from emission intensive towards ecological production practices can abate emissions • Examples: stop of field residue burning, synthetic fertilizer replacement, livestock management
Efficiency / Recycling	• Time and financial savings through reduced external inputs • Effective (re-)use protects local natural resources • Reduction of external energy intense inputs	• Reduced production costs allows for financial buffer in in climate crisis • Reduced dependency on external resources might increase resilience to natural or economic shocks	• Reduced emissions from efficient and effective (re-) use of resources • Avoided emissions e.g. from less food wasted
Circular Economy	• Producers and consumers are connected more closely • Local economic development opportunities fostered • Socially fair production facilitated and local needs by producers and consumers considered	• Participatory guarantee schemes, local producer's markets, community based production and retail can foster social safeguards for individuals against shocks • Short food chains can increase income of producer and provide fair prices for consumers, thus allow for financial savings for more critical times • Local employment and good work conditions in work communities might buffer negative economic co-effects of climate impacts (e.g. price volatility)	• Avoided emissions from shorter storage and transportation units of inputs for production or retail of produce