



## BREAKING AWAY FROM INDUSTRIAL FOOD AND FARMING SYSTEMS

Seven case studies  
of agroecological transition



**EXECUTIVE SUMMARY**

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## BREAKING AWAY FROM INDUSTRIAL FOOD AND FARMING SYSTEMS:

Seven case studies of agroecological transition

Food and farming systems around the world are driving environmental degradation, loss of vital ecosystem services, economic hardship for smallholders, socio-economic inequities, and debilitating health impacts and food insecurity for many. The majority of these problems are linked to 'industrial agriculture': the input-intensive crop monocultures and industrial-scale feedlots that now dominate many farming landscapes.

A new agroecological paradigm is required, rooted in fundamentally different relationships between agriculture and the environment, and between food systems and society. The seven case studies in this report provide concrete examples of how, in spite of the many barriers to change, people around the world have been able to fundamentally rethink and redesign food systems around agroecological principles:

- **Case study 1.** Santa Cruz, California, USA: Turning strawberry monocultures into sustainable food and farming systems through a 30-year farmer-researcher partnership
- **Case study 2.** San Ramón, Nicaragua, and Veracruz, Mexico: Breaking away from industrial commodity production in Central American coffee-growing communities
- **Case study 3.** Chololo, Tanzania: Rethinking food, farming, forestry and resource management to build an 'Ecovillage'
- **Case study 4.** Puhan Rural Community, Shanxi, China: Rebuilding community ties as a pathway to cooperative-led food systems
- **Case study 5.** Drôme Valley, France: Making the radical mainstream and the mainstream radical to build Europe's first organic region
- **Case study 6.** Vega, Andalusia, Spain: Sustaining transition through changing political winds
- **Case study 7.** Cuba: Turning economic isolation into an opportunity for agroecological transition

The findings of the seven case studies are summarized in the table below.

Overall, the case studies show that it is possible for communities, regions, and whole countries to fundamentally redesign their food and farming systems. The change process can be initiated from a variety of entry points, and does not always begin on the farm with input substitution. Transition can also be kick-started by community-building activities, farmer-researcher partnerships, and even by external shocks that make people question the status quo.

However, change must spread to other dimensions in order to drive forward and sustain transitions. Ultimately, changes are required in four key dimensions – in production practices, in knowledge generation and dissemination, in social and economic relations, and in institutional frameworks.

It is when these different types of change combine and reinforce one another that power is reconfigured, and reliance on the existing brokers of inputs, knowledge, and market access is drastically reduced. In other words, the multiple 'lock-ins' of industrial food systems can be overcome and new sustainable food systems can start to emerge.

The following leverage points proved particularly important for driving transitions across the case studies:

- 1. Building new community-led governance structures and economic systems between the state and the market.** Several transitions were driven forward by the emergence of hybrid, informal, community-led institutions, and governance structures – rather than relying on change happening within formal institutional frameworks. In some cases, the transition process was tantamount to a civil society-led rural development strategy, entailing steps to relocalize food systems, to reserve productive capacity and resources for supplying local communities, to provide a range of services to rural populations, and to reinvest profits into the community when selling into formal/distant markets.
- 2. Developing hybrid roles for key actors.** Change can be unlocked when actors take on hybrid roles, allowing new brokers of knowledge, inputs, and market access to emerge. The cases show that politicized farmer/peasant organizations and cooperatives can be highly influential, particularly if they combine cooperative marketing functions, farmer-to-farmer knowledge sharing, community-building activities, and political advocacy.
- 3. Forging new alliances across disconnected domains.** In some cases, change was unlocked by creating improbable alliances that brought together farmers, consumers, and environmental groups, and brought institutional actors into contact with more radical actors. Avoiding organic/ agroecology becoming closed niches, facilitating ongoing exchanges with mainstream actors, and keeping the door open for late adopters were key factors in maintaining momentum and building powerful alliances over time.
- 4. Anchoring transitions in counter-narratives and theories of change.** Narratives and theories of change matter, and can help to root transitions in local identity and culture, as well as allowing people to differentiate themselves from the previous/dominant model and to embark on a new course. Examples of this ranged from the emergence of influential opinion-forming media and information sources, to the use of cultural media like song and dance to make sense of the transition, and critical historical reflections to build a basis for transition. Across the cases, agroecology itself provided a unifying narrative to capture the change process underway.
- 5. Relocalizing food and farming systems.** Some degree of reconnection to local markets, culture, and community proved crucial across the cases. This included a focus on home gardens, farmers' markets, CSA schemes and other forms of direct sales, local public procurement, as well as steps to source inputs within the farming communities. This did not come at the expense of external trade: actors were able to negotiate better terms on national/international markets on the basis of the new organizational capacities developed through the transition initiatives. With its own infrastructures, extension agents and retail circuits, organic agriculture provided a key focus in many of the cases and helped to secure local and distant markets, as well as political support and funding, as farmers shifted their practices.
- 6. Promoting farmer-to-farmer knowledge sharing.** Farmer-to-farmer knowledge sharing, farmer-field schools, and demonstration farms emerged across the case studies as powerful drivers of transition – succeeding where linear extension models have failed. In several cases, they helped to bring a large number of farmers on board and build solidarity between them. As evidenced in the broader literature on agroecological transitions, farmer-based systems allow micro-regional agroecological knowledge to persist in the face of standardized approaches of-

ferred by state- or agribusiness-led extension services. Several of the cases in fact show fruitful interaction between farmer-to-farmer systems and government research centres.

**7. Empowering women and young people to drive transition.** In several cases in the global South, dedicated steps were taken to expand women's livelihood options, and to allow women to play a meaningful role in decision-making regarding their activities. Initial steps in this direction appear to have led to sustained engagement of women in the projects, helping to drive positive impacts for women and for the community more broadly. A focus on youth also helped to spark and sustain transition, particularly where young people were encouraged to remain in the countryside and take up agroecological farming.

While these initiatives benefitted from some form of political support, it did not always endure over time. Prevailing political incentives have continued to support industrial agriculture and to lock out alternatives.

Some of the most impressive impacts of these transitions – greater resource efficiency, improvements in community livelihoods and nutrition, increased resilience to shocks, biodiversity enhancement – tend to be overlooked at the political level. Moreover, transition initiatives may be delivering positive impacts simply by keeping land in (sustainable) agricultural production and keeping people in rural communities in the face of unfavourable macro-economic and political conditions.

Globally, the policy environment may now be shifting. The FAO's increasing receptiveness to agroecology testifies to this policy opening. The risks of dilution and co-optation are nonetheless high, as interest arises in bringing experiments to scale and large-scale actors enter the playing field. Debate must therefore be refocused on 'scaling out' agroecology. Transitions must be designed with local communities – not imposed from the outside based on a one-size-fits-all model, or reduced to a focus on export-oriented value chains.

While different analytical approaches must continue to cross-fertilize, it will be important to converge on common approaches to promote agroecology in the emerging policy spaces. Referring systematically to the different dimensions of change helps to capture the breadth of agroecological transitions, and to focus attention on documenting and measuring what matters – including but not limited to shifts in production practices.

More evidence on transitions occurring at large scales with strong political support will be useful to complement the case studies gathered here. Finding synergies between different bodies of transition literature (e.g. between agroecological transitions and urban food initiatives), and between the different actors underpinning those transitions, is also a major opportunity to be explored.

Moving forward, agroecological transition must increasingly be articulated as part of a broader transformation of society, extending to other facets of environmental and social relationships beyond food, recognizing the limits to growth, and asking what it really means to live sustainably.

SUMMARY OF FINDINGS FROM THE CASES

	CHANGES IN PRODUCTION PRACTICES	CHANGES IN KNOWLEDGE GENERATION & DISSEMINATION	CHANGES IN SOCIAL & ECONOMIC RELATIONS	CHANGES IN INSTITUTIONAL FRAMEWORK	KEY ENTRY POINTS & LEVERAGE POINTS FOR TRANSITION
Santa Cruz	Stepwise conversion from input substitution through to system redesign & re-diversification; Push-pull methods	30-year farmer-researcher partnership with dynamic research questions; Farm as learning centre	Long-term solidarity purchasing via UC Santa Cruz, CSAs & farmers' markets; Organic and food justice certifications; Consolidation in large farms & erosion of markets by mainstream organic	Methyl bromide ban; Uptake of organic practices by mainstream; Double-edged impacts of organic certification frameworks	Long-term farmer-researcher partnership; System redesign away from monoculture; Durable alternative markets; Long-term change vision held by lead actors
San Ramón Veracruz	Agroecology used to tackle short-term disease threats & build longer-term resilience through diversification, home gardens; Stabilization of production & food availability through the year	Participatory Action Research cycles responding to positive & negative results; Horizontal farmer-to-farmer & coop-to-coop learning exchanges; Nutrition/ cooking education to maximize home garden benefits	New coffee export brand; Dedicated women's activities and coffee fund; Dedicated youth programs	New price-setting process for coffee exports; Cooperatives becoming political actors; Multi-level cooperatives to divide functions and aggregate power	Dual focus on diversification & high-value exports; Building capacity & change mentality among local orgs & coops; Empowerment of women as decision-makers
Chololo	Package of agroecological technologies; Focus on optimal planting times; Promotion of agro-forestry & resource conservation across community	Technical guidance through technology groups & farmer-to-farmer demonstration approaches; Participatory appraisal of problems & solutions	Community-building through awards, celebrations & visibility of pioneering farmers; Women's empowerment in selecting & pursuing new livelihood activities	Conscious alignment with national climate adaptation policy; Visits from national policymakers & involvement of local policymakers	Multi-sectoral focus (ag., livestock, water, energy, resources) & multi-disc. project team (university, govt. ag. research institute, local authority & NGOs) for wide buy-in; Politically-sellable climate adaptation model
Puhan	Gradual steps to reduce chemical inputs & shift to agroecological practices; Production in cooperatives	Training sessions organized by cooperatives; Focus on technical knowledge & policy awareness; Intergenerational knowledge transfer to keep youth on farms	Community-building over profits & productivity; Wide array of services provided by cooperatives; Women-focused initiatives building ownership; Equal shares of produce for community, CSAs, & formal markets	State policies failing to stem rural decline; Community-led parallel institutions & services provision; Emerging policy support for cooperatives & ecological transition	Development of cooperative-led rural development & rural livelihood approach; Community activities to build basis of solidarity & common interest; Balancing of local consumption, CSAs & formal markets
Drôme	(Re-)adoption of organic farming practices (especially elimination of agrochemicals and upscaling of organic fertilizer production and use); Whole-farm organic conversion	Dissemination of info. on organic production techniques through trade journals, input providers & "neo-rural" environmentalists; Agricultural knowledge centres bridging organic/conventional divide	Organic farmers taking on leadership positions; Establishment of new logistical and marketing channels through grassroots organizations; Two-speed transition in upper and lower valley	Support through 'communities of municipalities'; Adoption of region-wide 'Biovallée' plan; Access to national and EU-level funding; Modest opening of 'Chambres d'agriculture' to organic shift	Connection of bottom-up organic movement with political rural development agenda; Gradual mainstreaming of organic via interactions between organic & conventional farmers and between grassroots & institutional actors
Vega	Redesign of regional agroecosystem & management practices in line with organic principles; Focus on re-establishing nutrient & resource flows, local input sourcing	Transdisciplinary historical reflections on local farming system & rural decline through the lens of Agrarian Metabolism; Stakeholder engagement to co-design Organic Farming Plan	Multiplicity of civil society groups defending organic food & farming (women-led, education-based; environmentally-focused); movement consolidation through ecomercados & Agroecological Network of Granada	Establishment of research centre with regional & provincial funding; Regional govt. support for three-year plan (inc. public procurement schemes) but withdrawn after breakdown of political coalition	Broad alliances across producer/consumer divide forged in negotiation of Organic Farming Plan; Broad base of civil society activism to maintain momentum despite withdrawal of political support
Cuba	Input substitution followed by adoption of agroecological techniques such as diversification, crop rotation, agroforestry & crop-livestock integration; Urban agriculture	Farmer-to-farmer knowledge exchange; Provision of biological inputs via state research centres; Circular knowledge flows between farms & govt. agencies via 'bus tours'; Knowledge spread by coops & Agricultural Polytechnic Institutes	Highly organized peasant agroecology movement driven by national small farmers' association with social process methodology; Land, machinery, & credit pooling through cooperatives	Decentralization of state farm sector; Institutionalization of agroecology in state & research institutions; Supportive policies (e.g. land reform) alongside continued support for industrial agriculture	Forced adjustment due to external shocks; Gradual alignment of various orgs. & govt. institutions around agroecology; Rapid spread of new practices via farmer-to-farmer approach