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"Can agroecological farming feed the world? Farmers' and academia's views"

## Bottom-up or top-down? Transitioning to agroecology KATHARINA SCHILLER

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## Abstract

Although agroecology has gained recognition from e.g. the IAASTD and FAO as an important solution for creating more sustainable agri-food systems, it remains a niche form of production in many countries. In Nicaragua, which has been a vanguard of agroecology since the 1970s, bottom-up processes (based in action from farmers and civil society) and top-down processes (based in government policy) have together supported the development of agroecology as a science, a set of agricultural practices, a movement, and politically. What can be learned from the Nicaraguan experience, and how can these learnings be applied in other contexts? Based on a mixed methods, longitudinal case study, this paper explores the growth of agroecology in Nicaragua and derives recommendations for supporting agroecology in other countries. Using a socio-technical lens, the paper unpacks the development of agroecology as the growth of a new socio-technical system. Based on the multi-level perspective of transitions to sustainability, an innovation history timeline was created that maps events and involved organisations and categorises these as bottom-up or top-down. While the development of agroecology is often seen in the literature as more of a grassroots-led, bottom-up process, the analysis lead to two main findings that challenge this assumption. First, the results show that in Nicaragua, the interplay between bottomup and top-down processes has pushed the growth of agroecology. Formalized agroecology first emerged through a government-associated organisation, was later strongly supported by farmers' organisations and civil society, and is now supported by a broad cross-section of actors that initiate both bottom-up and top-down activities. Second, individuals and organisations that navigate between bottom-up and top-down spaces are central actors in supporting agroecology. Such hybrid actors are able to push for agroecology in both spheres without losing legitimacy in either. The results point to the important roles of both bottom-up and top-down processes to support agroecology, and the central functions of intermediaries in supporting transitions to agroecology. To further support the growth of agroecology in countries around the world, recommendations are derived from the case study and generalised to be applicable for policy and practice in different contexts.

Keywords: Agroecological transitions, case study, multi-level perspective, socio-technical transitions

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