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Policy Brief

Agroecology Localisation for Building Resilient Local Food Systems in Nepal

KEY MESSAGES

Nepal's food systems face interconnected challenges. Rising import dependency, climate change, biodiversity loss, weak local markets, and persistent malnutrition require a systems approach rather than isolated agricultural interventions.

Agroecology offers a practical pathway for food system transformation. Agroecology addresses the triple planetary crisis of climate change, biodiversity loss, and pollution while strengthening resilient food systems, nutrition security, healthy ecosystems, and sustainable livelihoods.

Localizing agroecology is critical for achieving resilient food systems. Provincial and local governments are well positioned to drive agroecological transitions by integrating agroecology into local planning, extension services, public investment, and community institution. Localised approaches enable context-specific solutions that reflect Nepal's diverse agroecological, socio-economic, and cultural contexts.

Strengthening local institutions accelerates agroecological transition. Empowering local governments, community institutions, and farming communities strengthens innovation, collective action, and inclusive governance while enhancing local ownership of food system transformation.

Investment in local innovations and local food economies delivers multiple benefits. Agroecological model villages, participatory action research, Farmer Field School (FFS), Participatory Guarantee System (PGS), local branding, local markets and institutional procurement, and biodiversity-based enterprises simultaneously improve livelihoods, nutrition, biodiversity conservation, climate resilience and local economic development.

Institutionalizing agroecology within local governance is essential. Embedding agroecology into the Palika Agroecology Plan (PAP), annual programmes and budgets, while aligning investments with the National Agroecology Roadmap and Right to Food and food sovereignty commitments, provides a practical pathway towards resilient and inclusive local food systems.

WHY AGROECOLOGY MATTERS?

Nepal's food systems are at a crossroads. Agriculture remains central to livelihoods, food security, nutrition and the national economy, yet it faces mounting pressures from the triple planetary crisis — climate change, biodiversity loss and environmental pollution. These challenges are compounded by declining soil fertility, depletion of water and other natural resources, increasing dependence on imported food and agricultural inputs, labour migration, weak local markets, and persistent malnutrition, all of which undermine the resilience and sustainability of local food systems.

These interconnected complex challenges cannot be effectively addressed through sectoral and conventional production-focused agricultural systems alone. They require holistic multi-sectoral approaches and efforts that are integrated, sustainable and empowering to local communities, particularly women and smallholders, while improving food production, nutrition, ecosystem health, climate resilience, rural livelihoods, and local economic development.

Agroecology offers such a pathway. By integrating ecological principles with scientific innovation, indigenous knowledge and inclusive governance, agroecology enhances biodiversity, improves soil health, reduces dependence on external inputs, strengthens climate resilience and promotes sustainable livelihoods. As a systems approach, it provides practical solutions to the triple planetary crisis while advancing resilient and equitable food systems.

WHY AGROECOLOGY LOCALISATION?

Nepal's transition towards resilient food systems depends not only on promoting agroecological practices but also on strengthening the local institutions, governance systems, and markets that enable their adoption and scaling. Under Nepal's federal system, provincial and local governments have an opportunity to translate national commitments into locally relevant action by integrating agroecology into planning, extension services, public investment, and territorial markets.

Nepal has recognised agroecology as a national priority and developed a National Agroecology Roadmap through a multi-stakeholder process involving government agencies, research institutions, farmers' organisations, and civil society organisations. However, there are challenges in terms of translating this national commitment and roadmap priorities into effective action on the ground through localising at provincial and local governments and community level.

Localising agroecology allows provincial, local governments and communities to design solutions that reflect their unique agroecological conditions, indigenous knowledge, climate risks, communities and development priorities.

Localising agroecology enables context-specific solutions: Nepal's highly diverse agroecological zones differ significantly in climate, soils, biodiversity, production systems, and socio-cultural practices. A single approach and the same solutions may not fit well in every context. Localising agroecology enables provincial and local governments to design solutions based on local resources, indigenous knowledge, climate risks, and communities' priorities.

It strengthens local ownership and governance: Federalisation provides provincial and local governments with greater

responsibility for agriculture development, natural resource management, and local economy development. This provides an opportunity to institutionalise agroecology through decentralised planning, participatory decision-making, and locally driven investments. Integrating agroecology into local planning, budgeting, extension services, and public investment strengthens local ownership, accountability, and long-term sustainability.

It builds resilient local food systems: Agroecology promotes context-specific diversified crop-livestock-forest systems, local seed systems, organic nutrient management, biodiversity conservation, and efficient resource use. These approaches reduce dependence on imported agricultural inputs and lower the cost of production while strengthening resilience to climate change, market volatility, and environmental degradation.

It stimulates resilient local economies: Strengthening territorial markets, short value chains, Participatory Guarantee System (PGS), local branding, value addition and marketing, institutional procurement, and local agroecological enterprises enables farmers to retain greater value locally while improving consumer access to nutritious and healthy products.

It empowers communities and promotes inclusive development: Agroecology values farmers as innovators and strengthens community institutions such as cooperatives, community seed banks, farmers' field schools, producer groups, and other community institutions. It also creates greater opportunities for women, youth, indigenous people, and marginalised communities to participate in decision-making, entrepreneurship, and local food system governance, supporting local entrepreneurship, job creation, and more inclusive rural economic development.

It contributes to national development priorities: Localising agroecology supports implementation of Nepal's National Agroecology Roadmap, the Right to Food and Food Sovereignty Act, climate adaptation commitments, biodiversity conservation targets, and the Sustainable Development Goals by simultaneously advancing food security, ecosystem restoration, climate resilience, nutrition and rural prosperity.

AGROECOLOGY LOCALISATION IN PRACTICE: SOME EVIDENCE FROM THE FIELD

Experiences from different regions of Nepal demonstrate that localising agroecology can simultaneously improve food and nutrition security, strengthen livelihoods, conserve biodiversity, and enhance climate resilience. The following examples illustrate how locally driven initiatives are translating agroecological principles into tangible development outcomes.

Palika Agroecology Plan (PAP): Institutionalising agroecology at local levels

Under the PRAS project, LI-BIRD, in collaboration with IFAD, ICIMOD, and the R-HVAP programme, facilitated the development of PAP as a practical local planning and implementation framework to support agroecology transition in Lekbeshi Municipality (Surkhet), Aathbis Municipality (Dailekh) and Patarashi Rural Municipality (Jumla). The PAP provides a systemic approach to assess the municipality's agroecological context, identify gaps and priority interventions, and develop an implementation plan aligned with local development priorities. It offers a practical mechanism for institutionalising agroecology within local governance and accelerating the transition towards resilient local food systems. The successful implementation of PAP demonstrates its potential as a scalable mechanism for institutionalising agroecology across local governments of Nepal. Building on these results, R-HVAP plans to support development of PAP in an additional 77 local governments across Lumbini, Karnali and Sudurpaschim Provinces.

Maramche Agroecological Village: A community-led model for resilient food system and rural livelihoods

Maramche, located in Annapurna Rural Municipality of Kaski district, stands as a practical model for agroecological transformation through the Agroecological Village (AEV) approach, demonstrating how localised, community-led systems can drive resilient and sustainable food systems. With support from the Climate Resilient Agriculture (CRA Phase I–III) project, funded by Bread for the World (BfDW) and implemented by LI-BIRD, all 36 households of Maramche are organised under the Shree Pragatisheel Agriculture Cooperative, ensuring inclusive governance, service delivery, and knowledge exchange. Guided by a seven-element agroecological framework aligned with global principles, Maramche has strengthened community institutions, revitalised agrobiodiversity through the Annapurna Community Seed Bank (conserving 42 crops, 130 varieties, and 2 registered landraces), and promoted climate-resilient practices such as organic soil management, crop diversification, biopesticides, and efficient water use systems. Furthermore, the integration of women-responsive technologies and renewable energy has reduced labor burdens while enhancing productivity and climate resilience. The local marketing system has been significantly strengthened through a collective marketing approach and a local collection center, which reduces post-harvest losses, shortens the producer-to-consumer supply chain, and improves price realisation. Consequently, annual sales from vegetables, dairy, rice, and vegetable seeds exceeded NPR 10 million in FY 2080/81, illustrating the economic and ecological benefits of integrated agroecological farming. The experience from Maramche highlights that agroecology, when embedded in local institutions and supported by enabling policies and multi-stakeholder collaboration, offers a scalable pathway toward food sovereignty, climate resilience, and inclusive rural development.

Agroecological Enterprise of Local honey with Mulyawan branding in Surkhet, Karnali

In Maniramkada village, located in the northern part of Bardiya National Park in Bheriganga Municipality, Surkhet, native beekeeping farmers have improved their livelihoods through local value addition and the branding of honey under the **"Mulyawan"** label. A total of 22 farming households are organised into a group for agroecological farming and the collective production and marketing of honey. In collaboration with Renewable World (RW) and Karnali Province Government, LI-BIRD piloted this initiative in Surkhet. Farmers received capacity-building training on pollinator-friendly farming practices and beekeeping, along with production inputs such as modern beehives, beekeeping toolkits, and the plantation of forage tree species, including Chiuri (*Diploknema butyracea*). Following improvements in honey processing, packaging, branding, and access to formal markets, the price of honey increased from approximately NPR 600 per kilogram to NPR 1,200 per kilogram. This experience demonstrates that investments in local branding and biodiversity-based enterprises can simultaneously enhance household incomes, conserve biodiversity, and promote local economic development.

School Mid-day Meal: Linking local agroecological production to public procurement

The Dhauligaad Agriculture Cooperative, located in Ward 5 of Tatopani Rural Municipality, Jumla, demonstrates the value of integrating agroecological production with local school meal programme for strengthening market opportunities. Through the cooperative, locally grown millets, beans, Marsi rice, vegetables, and other indigenous crops are supplied directly to ten local schools under the School Mid-Day Meal Programme, benefiting 657 schoolchildren. In collaboration with the local government, World Food Programme (WFP) and UNDP, LI-BIRD supported the cooperative by strengthening its institutional capacity, mobilising farmers to produce diverse local crops using nature-friendly farming practices, conserving local crop diversity through a community seed bank initiative, and organising women farmers for the collection and processing of indigenous crops. In 2025, the cooperative achieved an annual turnover of NPR 1.3 million by supplying food to schools under the School Mid-Day Meal Programme. This initiative improved market security for 350 farmers, contributed to the conservation of indigenous crops, and enhanced schoolchildren's access to diverse, nutritious, locally grown fresh foods. The initiative illustrates how localised governance can simultaneously strengthen biodiversity conservation, improve rural livelihoods, enhance nutrition security, and promote food sovereignty at the local level.

TOWARDS LOCALISING AGROECOLOGY: RECOMMENDATIONS FOR FUTURE ACTIONS

Localising agroecology requires more than promoting agroecological technologies and practices. It demands an enabling policy environment, coordinated investments, strong local institutions, and inclusive governance that supports resilient local food systems. The following recommendations provide a roadmap for provincial and local governments to accelerate agroecological transitions.

Institutionalise agroecology within local governance and development planning

Agroecology integration into local governance systems ensures sustained political commitment, coordinated implementation, and long-term investment. Its integration into sectoral policies, annual programmes and budgets is important. Developing and implementing Palika Agroecology Plans (PAPs) aligned with Nepal's National Agroecology Roadmap will help ensure coordinated planning, sustained public investment and multi-stakeholder collaboration while enabling local government to address local priorities through context-specific agroecological interventions.

Enhance awareness, local capacities and extension services

Scaling agroecology requires transforming agricultural extension systems into participatory, knowledge-intensive, and farmer-centered services. The role of provincial and local governments in strengthening the capacities of extension workers, community resource persons, cooperatives, and farmers through Farmer Field Schools, participatory research, training, and farmer-to-farmer learning platforms on a regular basis is crucial.

Empower community institutions and promote inclusive governance

Strong community institutions are central to sustaining agroecological transitions and strengthening local food systems. Strengthening Community Seed Banks, Cooperatives, producer organisations, and local innovation platforms while promoting the meaningful participation of women, youth, indigenous peoples, and marginalised communities in planning, implementation, and decision-making are essential for advancing agroecology. Recognising indigenous knowledge and supporting collective action will strengthen local ownership, social inclusion, and long-term resilience.

Strengthen local food systems that contribute to local economies

Agroecological transition should be accompanied by investments that strengthen local food economies and create market opportunities for smallholder farmers. Provincial and local governments should invest in local value addition, biodiversity-based enterprises, Participatory Guarantee System (PGS), territorial markets, institutional procurement, and local branding and marketing to increase farmers' income, improve access to healthy and nutritious foods, and reduce dependence on external markets and imported agricultural products.

Promote ecosystem restoration and climate-resilient food systems

Agroecology should be recognised as a strategic investment for addressing climate change, biodiversity loss, and environmental degradation. Integrating agroecological approaches into climate adaptation, watershed management, agroforestry, soil health restoration, and biodiversity conservation will strengthen ecosystem services while enhancing the resilience and sustainability of local food systems.

Promote local models and scalable evidence

Agroecological initiatives in Nepal have demonstrated promising results; however, limited evidence on their impacts and scalability has restricted wider policy uptake and investment. Locally led models such as Agroecological Model Village and Demonstration and Learning Farms could successfully disseminate and document good practices and generate evidence for policy influence. The investment by provincial and local government in these models helps build a robust evidence base supporting informed decision-making and accelerating the scaling of agroecology across diverse local contexts.

Establish multi-stakeholder platform for coordinated planning, collaboration, learning, sharing and participatory monitoring

Establish and operationalise multi-stakeholder food system platforms at the provincial and local level to strengthen coordination, joint planning and implementation, monitoring and adaptive learning among government bodies, community institutions, private sectors, research and knowledge institutions and development partners.

Promote local knowledge base research and innovations

Limited documentation and sharing of rich indigenous knowledge and local agroecological innovations have constrained the adoption of locally adapted agroecological practices. Provincial and local governments need to strengthen participatory research by fostering collaboration among research institutions, universities, and local communities to generate evidence and scale locally adapted solutions.

Mobilise investment, partnerships, and evidence for scaling agroecology

Scaling agroecology requires sustained financing, strong partnerships, and evidence-based policymaking. Dedicated budget allocations for agroecology at the local and provincial levels, combined with climate and development finance, can accelerate the agroecological transition. Strengthening partnerships among governments, research institutes, civil society, development partners, universities, and the private sector will generate evidence, foster innovation, and support scaling of successful agroecological models across Nepal.

CALL TO ACTION

With a strong policy foundation established through the National Agroecology Roadmap and constitutional commitments to food sovereignty, Nepal has a unique opportunity to transform its food systems. Institutionalising agroecology within provincial and local governance and scaling locally led initiatives will strengthen food sovereignty, climate resilience, biodiversity, and sustainable livelihoods. Achieving this transition requires long-term political commitment, policy coherence, sustained investment, and coordinated actions among governments, communities, research institutions, civil society, the private sector, and development partners. By acting collectively, Nepal can build resilient local food systems with localisation that deliver lasting social, economic and environmental benefits for present and future generations.

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