

Chapter 17

Enabling Local Communities to Develop and Scale up Ecoagriculture: A Grassroots Perspective

by

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Abstract

Worldwide, local farming, herding, forest and fishing producers and their communities demonstrate deep expertise in ecoagriculture management, and are responsible for conserving millions of hectares of natural habitat within and beyond public protected areas. Recognition of this expertise is growing, but the global community needs to take further action to appreciate and learn from the ecoagriculture knowledge and innovation demonstrated by grassroots practitioners worldwide. A high degree of incompatibility remains between the holistic management approaches employed by communities to sustain inter-linked livelihood objectives, and the institutional environment within which they are constrained to operate. This chapter addresses priority actions required at the local, national and international levels to support, build upon and mobilize community-based ‘ecoagriculture’ expertise by respecting and building upon the existing knowledge base from the ‘bottom-up’, valuing and engaging local communities as true, equitable partners in decision-making processes.

Introduction

Worldwide, local farming, herding, forest and fishing producers and their communities demonstrate deep and diverse expertise in implementing ecoagriculture. Recognition of this expertise is growing, but the global community needs to take further action to appreciate and learn from the ecoagriculture knowledge and innovation demonstrated by grassroots practitioners worldwide, to respect local communities and indigenous peoples as both environmental stewards and rural producers, and enable them to play a central role in decision-making about ecoagriculture strategies and action.

This chapter reviews critical actions required at the local, national and international levels to support, build upon and mobilize community-based 'ecoagriculture' expertise. It has four main sections. The first provides an overview of existing community-led ecoagriculture initiatives and challenges faced. The second addresses inter-linked actions required to strengthen and scale-up community-led ecoagriculture. These center upon increasingly recognizing the knowledge and capacity that already exists within communities; mobilizing this knowledge to inform; building this knowledge base by coupling bottom-up knowledge mobilization with needs-driven service provision and financing, developing policy and market that recognize, support and enable the up-scaling of community-based ecoagriculture innovation. The third section addresses the challenges of moving community innovations to scale, from the grassroots up, and the final section discusses policy actions needed enable community-led ecoagriculture development. Recommendations are founded upon priorities articulated by grassroots and indigenous community representatives during

the International Ecoagriculture Conference and Practitioners' Fair (Rhodes and Scherr 2005) and in preparation for the 2005 United Nations World Summit (Gillis and Southey 2005; United Nations 2005).

Community Leadership in Ecoagriculture

Though community-led ecoagriculture has been widely documented in recent years, local communities remain marginalized in strategies to promote agricultural and rural development and biodiversity conservation.

Evidence of Community-Led Ecoagriculture

Farming, pastoral and forest communities worldwide conserve and manage millions of hectares of natural habitat within and beyond public protected areas. At least 22% of forests within developing countries are legally owned or administered by communities, with more than 360 million hectares of forest landscapes and forest-agriculture mosaics under community-led management within the Americas, Africa and Asia (Molnar et al. 2004). Furthermore, over half of the world's 102,000 Protected Areas have been established on ancestral lands of indigenous and other traditional peoples (Borrini-Feyerabend et al. 2004).

Within and beyond these landscapes, diverse and innovative landscape-management approaches are employed by small-holder farmers and local communities to deliver positive, integrated outcomes for food security, rural livelihoods and biodiversity conservation (Brookfield et al. 2002; McNeely and Scherr 2003). Such locally-driven initiatives vary in their genesis, focus, and scope. Incentives for local communities to sustain or transition towards ecoagriculture approaches are diverse, variable and highly context-specific, dependent on local socio-economic, environmental and political conditions but also policy and market frameworks at the national and international level. Motivations may include the proven effectiveness of traditional management systems at meeting local needs and values,

the need to maintain or restore essential resources and ecosystem services, or responding to new enterprise development opportunities.

Community-driven 'Landcare' groups are growing in a number of countries, including the Philippines, Australia, Uganda and South Africa, to mobilize collective action by farmers and local communities concerned about land degradation and natural resource management challenges. In Rajasthan's Arvari Basin, a community-led watershed restoration program centered upon re-instating *johads*, an indigenous technology to collect water from uphill river tributaries, has significantly enhanced groundwater re-charge and restored river flow, improving hillside forest productivity and water supplies for irrigation, wildlife, livestock and domestic use; The Kalinga Indigenous Peoples of the Philippines are collectively managing their watersheds to naturally irrigate their rice terraces using the proven traditional knowledge, integrating fish and vegetable production into rice terrace management. In Kenya's, arid Marsabit region, the Pastoralist Integrated Support Program is working with over 11,000 pastoral people to protect dryland biodiversity from over-grazing by strategically managing the movement of herds around vulnerable water points. Other examples include watershed self-help groups in India, and watershed networks at the district level in Thailand. Diverse groups of local producers, particularly in Latin America, are self-organizing to collectively secure price premiums from fair trade, organic and/or shade-grown certified systems (Millard, this volume). Of 400 community initiatives nominated world-wide for the Equator Prize for achievements in enhancing biodiversity while improving livelihoods, over 100 were ecoagriculture landscape initiatives (Isely and Scherr 2003).

Marginalization of local knowledge in agricultural development and biodiversity conservation strategies

Neither the concept of community-based management, nor recognition of the need for integrated approaches to conservation and rural livelihoods development is new (Brookfield et al. 2002). Yet sector-specific program interventions continue to either address local symptoms while ignoring underlying policy constraints, or deal with macro-level issues while ignoring local realities (McShane and Wells 2004).

Historically, local communities have been negatively affected by a reliance on top-down, sector-based strategies to address conservation and rural development challenges. The need for community engagement and ownership in decision-making and implementation processes has received little attention. Consequently, both conservation and rural development sectors have failed to reach, respond to or meet the needs of the majority of the local communities worldwide. Over the past few decades, conservation strategies have primarily been driven by conservation values of urban-based environmentalists in the North, with limited focus on species valued by local communities for food, medicines or cultural significance. The centralized designation and management of many protected areas by conservation authorities has at best ignored local people's dependence on crop, livestock, forest and fishery production and at worst forced displacement, with local communities marginalized from the process and often the land itself (Mogelgaard 2003).

Strategies to promote agricultural development have also ignored inherent inter-dependences between local livelihoods and sustaining the natural resources base, and have often failed to distinguish between enhancing agricultural productivity and achieving food security. Agricultural extension services have tended to encourage the replacement of more diverse, traditional farming practices with more intensive production systems, based upon a small number of new crop varieties. The lack of co-ordination between technical support offered by conservation, rural development, and agricultural actors has exacerbated the problem. Communities have often been the subject of technical assistance by these actors

working in the same region, each encouraging different course of action (Sundberg 1998), based on their own interests, rather than those of the community.

The need for local community involvement in natural resources management strategies was more widely recognize during the 1990s, driven by unsatisfactory results using the “parks without people” model. Investment in community-based initiatives intentionally seeking to link biodiversity conservation and livelihood objectives was significantly upscaled, particularly through Integrated Conservation and Development Projects (ICDP) and Community-Based Natural Resource Management (CBNRM) approaches (Wells et al. 1992; Hughes and Fintan 2001; Newmarket and Hough, 2000; Worah 2000). Nonetheless, documented ‘evidence’ to substantiate the effectiveness such approaches and support the rationale for devolving management authority to local communities still remains limited, leading critics to advocate a return to more traditional, protectionist approaches (Spinage 1998; Terborgh 1999).

Barriers to community-led agricultural development and conservation

The fundamental barrier to up-scaling successful community-led ecoagriculture strategies is that local communities are still not sufficiently valued and engaged as true, equitable partners in decision-making processes. A high degree of incompatibility remains between the holistic management approaches employed by communities to sustain inter-linked livelihood objectives, and the institutional environment within which they are constrained to operate. It is not enough for projects to intentionally link conservation and development objectives. Rather, initiatives should emerge from and be driven by community representatives themselves, based on innovations that meet their inherently linked livelihood goals and objectives. Local land use systems and decision-making are often founded upon long-term accumulation of knowledge and experimentation on what will and what will not

work (Sayer and Campbell 2004); such strategies have to be robust to unpredictability - in climate, in socio-economic circumstances, but also in external financing trends.

Current institutional environments are rarely conducive or receptive to understanding, learning from, supporting or up-scaling complex landscape management approaches and challenges experienced by local communities and/ or land managers. Communities do not operate in sector-specific, target-based or timeline-defined environments. Nonetheless, a tendency remains to 'shoehorn the complex, dynamic realities that shape community-led approaches into the constraints of time-bound tightly planned project frameworks', and narrowly defined sectoral-based institutional support structures' (Sayer and Campbell 2004). Complex community- and landscape-scale dynamics are often underestimated, with projects and investments based on incomplete understanding and/or inaccurate assumptions on the relationships between livelihood and conservation objectives, motivations, expertise and needs within a community (Sayer and Campbell 2004; Brookfield et al. 2002). For example, to a community located within a protected area, losing an important grazing area to a community wildlife project that does not in turn generate equal or more benefits to the same community ensures the project is doomed before it starts.

Time frames required to deliver tangible and sustainable outcomes are also underestimated, often falling well short of the time required to build trust, understanding and thus the long-term processes and partnerships required to catalyze sustained change. Project financing does not allow for the delivery of long-term outcomes, or the monitoring of long-term trends. For example, many community NRM systems historically considered good practice are now experiencing challenges to sustain themselves, under increased population pressures or changing market opportunities. Communities need to be actively adapting, innovating and learning within dynamic circumstances.

Strategies to Support Community-Led Ecoagriculture

As noted by the 2005 Millennium Ecosystem Assessment, a ‘significant constraint on developing effective management is not purely attributable to a lack of knowledge and information concerning different aspects of ecosystems - but failure of decision-making processes to adequately recognize and use information that does exist – particularly traditional and practitioners’ knowledge and innovation - in support of management decisions’.

To support and strengthen the potential of local communities to protect, develop and adapt ecoagriculture landscapes requires a concerted effort to develop relevant institutions, based on lessons learned from community-driven development. This section explores three sets of actions to create a more enabling environment:

- Build upon and strengthen the knowledge base and networks of local communities;
- Support and finance community-led, needs-driven ecoagriculture initiatives; and
- Develop policies that enable and support community-led ecoagriculture.

Building upon the knowledge base from the bottom-up

Building the necessary knowledge base and local capacity for improving ecoagriculture systems has three key elements: documenting community knowledge; supporting community-led knowledge-sharing; and supporting community-driven research.

Documenting community knowledge and expertise. Documenting community-based knowledge, management strategies and lessons learned offers an important foundation upon which to catalyze knowledge-sharing among community-based ecoagriculture practitioners. A prerequisite to processes promoting knowledge and technology exchange is taking the time to identify and understand who knows what (Fairhead, 1993). Such documentation can establish a baseline from which to identify knowledge- and capacity developments and

needs, and to demonstrate the value of community-based management to policymakers and researchers. A range of initiatives seeking to document local innovation and knowledge are underway, with varying purposes and target audiences. Internationally, the CBD has encouraged traditional knowledge databases and registers in support of traditional knowledge and intellectual property protection (UNU-IAS 2004). National-level examples include India's National Innovation Foundation (NIF) and Honeybee Network, facilitating peer-peer knowledge exchange by documenting and disseminating grassroots technologies and traditional practices, and a community-led ecoagriculture inventory recently initiated in Kenya, supported by Ecoagriculture Partners.

The complexity of documenting community-managed ecoagriculture practices should not be underestimated. Even within a community, individuals respond differently to changing ecological, sociological and economic circumstances (Pinedo-Vasquez et al. 2002). The diversity of responses and collective knowledge offers considerable strength in terms of the community's resilience and responsiveness to change. However, documenting such intra-community expertise is challenging, especially understanding the cause-effect relationships between management practices and outcomes, and representing the depth of knowledge accumulated over many generations. Documenting ecoagriculture requires understanding of interdependencies between the conservation and farming systems, not just at farm and community levels, but within the landscape mosaic.

Ensuring local ownership of documentation and monitoring processes is vital to enable local communities to define the information and outcomes they wish to document, the purpose and the target audience of the documentation process. As observed in the Talamanca community-based biomonitoring program, Costa Rica, 'Communities learn to demand information, articulate their needs and directly link their management strategies with the outcomes they are delivering' (Benson Venegas, 2006, pers com). The information that

communities may wish to document and the media they wish to use is likely to differ significantly from the information other stakeholders, such as researchers or policy makers may wish to see and consider informative. Documentation and monitoring processes designed and led by academic institutions and/or (inter-) government agencies 'may be excellent in terms of technical quality, but typically remain in the province of 'experts' (Venegas 2006, pers. com). An unthinking reliance on terminology and outcome indicators defined by policy-makers / researchers may reveal little of use to communities themselves (Brookfield et al. 2002), and/or may fail to appropriately represent and balance traditional knowledge with more 'science-based' perspectives.

Community-led processes for knowledge-sharing. A broad range of ongoing initiatives substantiate the effectiveness of processes that enable communities to share their knowledge. These include individual farmers' and community representatives demonstrating their practices to neighboring practitioners (as through farmer field-schools), the facilitation of community-community learning exchanges, community-dialogue spaces and community-to-community and farmer-learning networks. The *People, Land Management and Ecosystem Conservation* (PLEC) methodology, initiated in 1992, has supported community-based practitioners to share encouraging aspects of their management practice with contemporaries and take leadership in community discussions on capacity development, policy and research needs (Brookfield et al. 2002). Lessons from PLEC demonstrate its effectiveness. But they also caution against assuming that an individual expert in a particular practice will be willing to share his/her knowledge, or be most suited to take a leadership role; that practices demonstrated by individuals are appropriate and replicable by other community members when incentives, resource and knowledge availability may differ. Questions also arise around the incentives and motivations for individuals to share their knowledge, and around what

knowledge is sharable, particularly if this might depreciate an individual's competitive advantage (Pinedo-Vasquez et al. 2002).

As noted by Sayer and Campbell 2004, 'If one expects different actors within a landscape to act in a coherent way to achieve landscape-scale outcomes, it is highly desirable that they share a common understanding of what the landscape is, and , to the extent possible, what the desirable outcomes are and what the opportunity costs of different scenarios may be.' Co-learning and integrated knowledge management processes provide opportunities to move beyond emphasis on individual leadership to recognize that diverse stakeholders within a landscape hold different knowledge (in conservation, production, rural development), and that together, this collective expertise is necessary to deliver landscape-scale 'ecoagriculture' outcomes. Models are emerging to facilitate knowledge sharing and build a collective knowledge base, including the Integrated Systems for Knowledge Management framework developed in New Zealand (Allen and Kilvington 2001). The system seeks to enable a range of local land users, including communities, farmers, researchers, policy makers and other interest groups, to share their expertise and, through its collective knowledge base, support decision making on a range of resources management challenges.

The value of connecting individuals experiencing similar management challenges and opportunities extends beyond the landscape-level, motivating a worldwide proliferation of community- and farmer-driven networks to facilitate peer-peer knowledge exchange and community-led advocacy. Notable examples include the emerging national 'Landcare' movements worldwide; the Great Limpopo Transfrontier Park Rural Communities' Network initiated to support information sharing on transboundary protected area management concerns (Box 17.3); Thailand's 'Local Wisdom' farmer learning networks; and the 'Linking Local Learners' programs established through Kenya, Uganda and Tanzania to

support learning and peer exchange among smallholder farmers. Even at an international level, when practitioners operate in very different environmental, socio-economic and political contexts, significant benefits are derived from enhanced access to ‘fresh’ solutions and innovative approaches being employed by other communities worldwide to address shared challenges, particularly with respect to policies and markets. This has been demonstrated through the work of organizations including GROOTS International (www.groots.org) and the UNDP Equator Initiative (www.equatorinitiative.org) to facilitate international sharing and learning among local community representative on key issues pertaining to natural resources management, HIV/AIDS, disaster management etc.

Community-driven research. Investment is also needed to strengthen and build upon communities’ knowledge base. A significant disconnect remains between the demand for useful ecoagriculture-related knowledge and resources by grassroots practitioners and supply from research institutions, public agencies and other service providers. While diverse sources of ecoagriculture-related information and tools exist, many remain in the domain of NGOs and research institutions. Current research outputs are rarely accessible or appropriately adapted to meet the context-specific needs of grassroots practitioners. Inaccessibility relates to the media in which outputs are produced and disseminated, the terminology / language used and their predominantly sector-specific focus. This disconnect is a direct result of limited community engagement in the definition of research/project needs, objectives and outcomes. Research prioritization and investment remains predominantly shaped by the visions and desired outcomes of international and national research organizations, which rarely align with those of presumed beneficiaries. Research priorities need to be informed and shaped by community-based expertise and needs, building upon local knowledge of management challenges and potential solutions. Researchers can play a pro-active role by supporting communities to ‘translate’ community-generated

knowledge into forms that resonate with researchers and policy makers, and producing knowledge that is useful for landscape planning and negotiation among key stakeholders at different scales.

Rural development research is increasingly demonstrating the merits of increasing farmer participation in and influence over research and extension initiatives (Hussein 2000), enabling research outcomes and resultant service provision to be more relevant and responsive to local livelihoods. Participatory methodologies, including Participatory Rural Appraisals, offer opportunity to improve understanding between local communities and researchers. Even so, leadership of process design and implementation remain primarily in the hands of researchers, with farmer and community representatives engaged in the work programs of researchers (Water-Bayer et al. 2005). Rarely are local communities afforded opportunities to drive the research agenda, or even genuinely evaluate it.

Opportunities that enable communities to more proactively set research priorities remain piecemeal, but promising mechanisms are evolving. Local Agricultural Research Committees (CIALs) within Latin America offers one model. Established as ‘farmer-run research services’, CIALs aim to directly respond to local community and/ or small-holder needs (Ashby et al. 2000). Communities are responsible for electing the farmer-research committee. Research is conducted on priorities identified through community consultations, and research outcomes are reported back to the community. Each committee is provided with modest financing to offset research costs and risks associated with experimentation, and offered the support of a trained facilitator if required (Ashby et al. 2000). Currently CIALs are primarily focussed on ‘farm-level’ production challenges, such as crop and livestock varieties and pest management, with limited attention to more inter-disciplinary questions associated landscape management challenges, such as how to manage wildlife habitat in ways that improve on-farm productivity. Farmers and local communities typically consider landscape-

scale questions a priority only when these also promise to address more immediate challenges associated with improving on-farm production and food security (Ashby et al 2000).

Investing in Community-led Ecoagriculture

External support can play a valuable role in supporting community-led ecoagriculture, particularly by providing needs-based support services, community-focused market initiatives, and financial investments.

Needs-based support services

Effectively supporting communities to implement their ecoagriculture approaches requires the ‘re-tooling of service providers to offer advice, information and training on a much broader range of issues and processes’ (Lightfoot et al. 2005). Interdisciplinary institutions are needed, to provide “holistic” packages of services to support and respond to diverse management needs and motivations. These include not only technical support on agriculture and conservation management approaches, but also business and financial management; and market and enterprise development. Such institutions should enable communities to acquire the facilitation, advocacy and negotiation skills necessary to effectively participate in land-use decision making; negotiate and secure their rights to manage their resources, and engage with private sector actors; mediate relationships with other stakeholders operating in the landscape (with whom they need to co-operate to achieve ecoagriculture); and engage in equitable dialogues with external actors on the appropriateness of recommended management strategies. This is especially important when multiple stakeholder interests are seeking to exert pressure on how communities manage their resources, i.e conflicting advice from conservation and rural development sectors, or in the management of transboundary resources located within Protected Areas, biodiversity

corridors, watersheds and other shared ecosystems.. At present, few existing institutions are equipped to offer this range of support services.

Producers' and other community-based organizations are emerging as key service providers to their constituencies (Hussein 2000), with a growing number of producer co-operatives transitioning from exclusively production-focussed support towards a broader range of services. For example, the Fouta Djallon small-producer co-operative in Guinea only encourages farmers to capitalize upon new production opportunities once it can provide the necessary support services at each stage of the production chain (including credit, input supply, technical information and marketing) (Hussein 2000). This is complemented by supportive action at 'higher' institutional and policy levels to defend producer interests, particularly access to national markets. In Central America, the Asociación de Pequeños Productores de Talamanca (APPTA) offers a similar example. APPTA, a regional organic small farmer's cooperative, supports over 1,500 small farmers managing small farm agro-

Box 17.1: The role of smallholder producer organisations as service providers: An example from the Asociación de Pequeños Productores de Talamanca (APPTA)

APPTA, founded in 1987, is a regional organic cooperative supporting over 1,500 smallholder farmers within La Amistad Biosphere Reserve to be successful in a competitive market, maximizing production and environmental benefits. La Amistad's 1,000,000 hectare Reserve and World Heritage Site, stretching along the Caribbean coast of Costa Rica and Panama, protects exceptionally diverse tropical ecosystems and is co-managed by local communities, NGO and government representatives.

APPTA is committed to consolidating economically viable agro-ecosystems as an integral element of the region's biodiversity conservation strategy. This is achieved by promoting organic agro-ecosystem management; processing and marketing organic products from Talamanca's family farms, and providing training to the Talamanca people to encourage ways of life that are harmonious with indigenous culture, profitable, and environmentally ethical. The development of local processing infrastructures for organic cacao and bananas, quality control checks, marketing strategies, and an organic certification program has enabled APPTA to become the largest volume producer and exporter of organic products in Central America. In addition to creating new markets for some products, farmers receive an additional 15 -60% revenue for their certified organic products.

These activities are a core element of the Talamanca Initiative, involving the collaboration of over 20 grassroots, community-based organizations, many small-scale producers and the Costa Rican Ministry of the Environment, with leadership from the locally-based organizations ANAI, APPTA, and CBTC. These partners, each with its own specific objectives, share the common goal of improving quality of life in Talamanca through the preservation and environmentally-ethical use of its unique biodiversity and ecosystems. A core belief is that the key to conservation and sustainable development is the successful management of these issues by the local people. Tangible environmental and economic benefits are realized by the rural poor through sustainable agriculture and forestry systems, locally-owned ecotourism enterprises, and biodiversity monitoring and conservation. Beyond Talamanca, benefits have included organic certification and higher prices paid to over 2,000 mostly indigenous farmers in Bocas del Toro, Panama, in collaboration with the Cooperativa de Cacao Bocatoreña, COCABO (Venegas, 2006).

ecosystems within and surrounding the Gandoca-Manzanillo National Wildlife Refuge, Costa Rica/Panama, to be successful in a competitive market (**Box 17.1**).

Supporting community-based and producer organizations to play the role of 'holistic service' providers will require significant investment to build upon existing capacity. For example, PROCYMAF, a program to support community forestry producers in southern Mexico, organized a roster of Providers for Technical and Professional Services, who received training to enhance their expertise on relevant topics, including building social capital (Scherr et al. 2004).

Capacity limitations mean that responsibility for service provision should be held by more than one locally-based organization. The Namibian Association of CBNRM (Community-based Natural Resource Management) Support Organizations (NACSO) recognizes and responds to the reality that no 'single institution is likely to houses all of the skills, resources and capacity to provide community organizations with the multi-disciplinary assistance required. Instead NACSO aims to systematically strengthen co-ordination between various local-level stakeholders within the region, and draw upon the respective expertise of its twelve service providers (11 NGOs, and the University of Namibia).

Market-based strategies to support community-led ecoagriculture. For many rural communities, ensuring long-term livelihood sustainability and independence from external financing will depend on their ability to access and benefit from a range of markets that value products and services from an ecoagriculture landscape. Most product markets do not currently value the role of producers as environmental stewards. In response to this limitation, diverse initiatives to enhance financial incentives for conservation within agricultural landscapes have emerged. These include both product certification and environmental service payments (PES) schemes (Willie et al; Millard, this volume; Scherr and Inbar, this volume; Scherr and Bracer (2006)).

The extent to which existing incentives offer long-term livelihood opportunities for communities and smallholder producers demands further attention. Biodiversity payments are likely to hold most promise for communities located in areas supporting globally or nationally significant biodiversity, for which there is a willingness to pay for its conservation and/or where communities are able to produce products or services with high national and/or international demand. Yet barriers to communities accessing and benefiting from these incentives are considerable. Financial premiums from production certification and ecosystem service payments are often only attainable once high compliance verification costs have been met. Rather than offering long-term financing for resource stewardship, certification and payment schemes may unwittingly continue the trend of imposing external standards and management models on communities, or foster dependency on financial and technical support to meet standards (van Dam 2002). Molnar et al. (2003) highlight the risks of certification bodies and technical support becoming preoccupied with compliance standards and blinded to the real objectives of community management.

The challenges faced by communities in the development of a certifiable enterprise include the need to assess prospective buyers, market opportunities and their capacity to sustain supply – both volume and quality – within unpredictable, competitive product and service markets. Co-ordinating diverse small-holder farmers to collectively supply ‘bundles’ of products and services is often necessary, yet highly complex. Communities also need the capacity to negotiate and enforce business contracts with private and public sector buyers. The majority of current certification and technical support services are not equipped to appropriately advise communities on these critical issues (Molnar 2003). Such lessons learned highlight the need for communities themselves to help drive such market-based initiatives and inform their development, based on their knowledge of their short- and long-term potentials to supply and their capacity to manage marketing processes. Throughout the

world, small-scale producers are self-organizing to develop their processing and marketing capacities to access national and/or international markets for ‘green’ products. Examples include APPTA (**Box 17.1**) in Costa Rica and Café de la Selva in Mexico.

Financing community-led ecoagriculture. Financing frameworks for rural development and conservation are currently not conducive to supporting community-driven innovation. The reluctance of governments, outside NGOs and donors to invest in long-term relationship-building and learning processes leads to piecemeal investment in short-term projects, with no commitment to long-term follow-up or take advantage of knowledge acquired and lessons learned from projects. Unwillingness to fund such learning and relationship-building processes fosters ‘islands of success / best practice’ which are readily drawn upon and cited, yet remain isolated (Roe et al. 2000) and unable to upscale to realize broader-level impacts (Pretty 1998; Binswanger 2003).

Logical frameworks outlining resource allocations leave little freedom for local-level innovation, or time for newly acquired knowledge to be evaluated, adapted and applied. Results and deliverables are often determined before the project even starts, without any clear assurance that these outcomes are those desired by the project’s intended beneficiaries (Sundberg 1998). Local communities and producers are afforded very little engagement in decision making on desired deliverables, how resources are allocated, timeframes for delivery or indicators designed to evaluate ‘success’.

Opportunities to more effectively support community-led innovation through the direct delivery of financing to communities are being explored. Piloting of Local Innovation Support Funds (LISFs) is underway in Cambodia, South Africa, Sudan, Uganda, Ethiopia and Nepal (Water-Bayer et al. 2005). LISFs place finances directly in the control of local community-based organizations (LBL 2002), aiming to enable small-scale farmers the

flexibility and independence to undertake their own initiatives to address local problems. Principles associated with LISFs include transparency in funding application and disbursement, minimum paperwork and rapid decision-making. Funds offer communities the flexibility to experiment, learn but also to fail by covering risks associated with trying 'creative ideas without knowing for sure what the results will be' - a freedom often precluded from conventional financing frameworks.

Concerns regarding the financial management capacity of community-based organizations are commonly raised by donors in response to calls for increasingly decentralized funding mechanisms. An increasing number of community-based organizations are themselves recognizing and responding to this constraint to securing financing. The financial management systems training currently being led by the Kalinga Mission for Indigenous Communities and Youth Development, Inc. offers an example (**Box 17.2**). As recommended by Communities to the 2005 Millennium Summit (Community Commons Declaration 2005), financing mechanisms such as an international 'Global Community Learning Fund' are required to support the replication and up-scaling of innovative, community-based resource management strategies. Such a fund should be designed and primarily governed by community representatives themselves, with funds disbursed directly to community-based organizations.

Box 17.2: Community-led capacity development in financial management and governance: An example from the Kalinga Mission for Indigenous Communities and Youth Development, the Philippines

For many centuries, the Kalinga Indigenous Peoples in the Philippines have sought to sustain their livelihoods while conserving their mountain biodiversity through an integrated, landscape-level approach. Local communities manage their watersheds to ensure a continual supply of rainwater to communal irrigation systems. Fish and vegetable production is integrated into irrigated rice terrace management. Within Kalinga, locally-led sustainable community development initiatives are supported by Kalinga Mission for Indigenous Communities and Youth Development, Inc. (KAMICYDI). KAMICYDI recognized and responded to the need for community-based organisations (CBOs) to institutionalise good governance and financial management systems as an essential pre-requisite to developing, managing and scaling-up effective ecoagriculture initiatives. Such systems are designed to complement and strengthen the existing CBO's traditional organisational knowledge and management systems. To date, approximately 50 locally-based organizations within Kalinga have been empowered to improve their governance. Training in financial accounting, management and reporting have enabled these CBOs to build the confidence to negotiate and build relationships with potential donors. This simple yet highly effective local capacity development support is now in high demand within the region and at a national level.

Support for scaling up grassroots success: Lessons learned from Landcare. Landcare movements began emerging in the mid-1990s as an approach for mobilizing collective action by local farming and ranching communities concerned about land degradation and natural resource management challenges. The approach centers on forming community Landcare groups, supported to varying degrees through partnerships with government and non-

government agencies (Cramb and Culasero 2003). Groups with a common agenda work together to identify how problems can be solved and mobilize resources to solve them, based on the principles of volunteerism, genuine participation, responding to local demand, and building partnerships and support from the local level. Groups engage in varying activities, including total farm care, catchment care, vegetation management, coastal management and property planning. Landcare approaches thus aim to build the necessary partnerships between farmer, catchment, regional approaches, and government policy to deliver broader landscape change, employing facilitators and coordinators to provide an interface between government agencies and Landcare groups.

The growth of Australia's Landcare movement has been explosive. There are now over 4,000 Landcare groups, with approximately one-third of Australian farming families engaged (AFFA, 2003). A Landcare Council has been established to provide ministerial advice, and create a platform to discuss and present views to the National Government, while a National Landcare Facilitator Program supports the training needs of local Landcare facilitators and coordinators. Within the Philippines, Landcare developed independently as a grassroots initiative based on a three-way partnership of farmers, local government units and the World Agroforestry Center (ICRAF), emerging through to efforts to support the adoption of soil and water conservation technologies in the uplands, in response to soil erosion and low productivity challenges. The rapid proliferation of Landcare groups, their diversification into a range of other activities, including participation in municipal natural resource management planning, and the development of municipal Landcare Federations influencing watershed and protected area management, has sparked widespread interest regionally, nationally and globally.

Landcare experiences within different local and national contexts illustrate the challenges of moving to scale. Relationships relevant at one scale, in one particular context,

do not easily transcend scales or contexts (Lovell et al. 2003). Scaling up Landcare necessitated flexibility to use different models, depending on locally-specific conditions. Successful scaling up does not depend on replicating the program itself, but more upon adapting (and creating) the conditions under which the program has worked (Berman and Nelson 1997; Schorr et al. 1999). Experiences also demonstrate the need to achieve a balance between community-initiated change, partnerships with local governments, and promotion of technological and institutional innovations by external actors. For example, it was easier to facilitate technology adoption than initiate institutional change – yet institutional changes were essential to establish a foundation from which to move the process forward.

Landcare groups flourished in situations where locally- adapted technologies had emerged, local authorities was supportive of grassroots initiatives and had the desire to work with farmers and other agencies, and a long-term research and extension presence was provided by supportive non-governmental organisations. Catacutan and Cramb (2006) highlight conditions that influence potentials for scaling up, with the relative importance of each condition depending on local realities:

- Initiatives offer a set of widely adoptable management options, enabling farmers the flexibility to develop more sustainable management approaches according to their needs, resources and preferences. Some built on existing local technologies or knowledge systems, others adapted ‘modern’ technologies. Farmers need to own the decision-making process and adopt the approach most appropriate to their needs.
- Landcare flourished in areas where conservation efforts were promoted and supported, and farmers were not affected by rapid economic change such as the growth of large-scale agribusiness or non-agricultural employment. Landcare also had better prospects where local politics were stable and Landcare leaders were able to establish good relationships with local government officials.

- Effective training, communication, and facilitation were central to Landcare's farmer-based extension approach, and also essential for scaling up.
- Even when local organizations are strong, grassroots initiatives significantly benefit from the concerted support of local and national governments and other non-governmental actors to mobilize resources. Within Australia, Landcare could not have grown so rapidly without national government support, which included US\$340 million of funding over ten years (Campbell 1994; Lockie and Vanclay 1997). Unlike Australia, the Philippines national government had insufficient resources to respond at the scale necessarily to deliver meaningful improvements to livelihoods and natural resource management. With a growing network of like-minded communities, local government representatives, NGOs, and project partners, mobilizing a critical mass of actors from the bottom-up offers possibility to influence the broader policy agenda.

Policies that Recognize and Support Community-led Ecoagriculture

Enabling community-based ecoagriculture requires coordinated responses at multiple scales and across multiple sectors. Locally-driven ecoagriculture approaches will have limited impact unless complemented by supportive policy frameworks. Yet there remains a disconnect between the sector-based policy targets determined by policy-makers at international and national level, and the individuals on the 'ground' who must play a central role in operationalizing them. Two broad sets of actions are urgently required: processes that effectively engage local communities in policy formulation; and legislation and policy frameworks that support community-led ecoagriculture.

Strengthen community representation in policy-making processes

Mechanisms to facilitate community representation within major international policy process are improving. The establishment of the UN Permanent Forum on Indigenous Issues

in 2000 promotes the integration and representation of indigenous issues within the United Nations systems. Community Dialogue spaces have been integrated into a number of international policy processes to facilitate dialogue between communities and international decision-makers (Gillis and Southey, 2005). Yet, such mechanisms should be more systematically integrated into the full range of international policy processes that ultimately impact communities' ability to manage their resources, including decision-making on rural development, production, trade and climate change. For example, community recommendations to the 2005 UN World Summit (Community Commons Declaration 2005) highlighted the need for strengthened community representation on global- and national-level task forces established to review national development strategies, particularly ongoing MDG-based poverty reduction strategies. The potentials to drive and inform policy processes from the bottom-up, through consistently ensuring community representation in decision-making bodies at the local, regional and national level is exemplified by approach of the Chibememe Earth Healing Association (**Box 17.3**).

Box 17.3: Community-driven advocacy to inform policy from the bottom-up in Zimbabwe

Since 1999, the Chibememe Earth Healing Association (CHIEHA) of Chiredzi, Zimbabwe has played an influential role in ensuring that local and national policies enable community engagement in the management of the Great Limpopo Transfrontier Park (GLTP). This 35,000-km² conservation area spans Kruger National Park in South Africa, Gonarezhou National Park in Zimbabwe and Limpopo National Park in Mozambique. A series of major awareness-raising activities have been pivotal to their considerable policy impact. For example, a high-profile 990-km cycle ride from Zimbabwe to the Durban World Parks Congress, South Africa, consulting with local communities en route, was undertaken to focus attention on the need for policies that allow communities to benefit from protected areas, and to lobby for enhanced community participation in the planning and management of the GLTP. Through such processes, CHIEHA has reached out to over 50,000 stakeholders in and around the GLTP to date—acting as a significant driver of enhanced community participation in national environmental policy development, particularly Zimbabwe’s National Environmental and Wildlife Based Land Reform Policy. Major policy impacts include recognition of community conservation efforts and initiatives as a pillar of biodiversity conservation and sustainable use in and around protected areas, particularly the critical role of local communities in Transboundary Protected Areas management, the legitimization of Community Conserved Areas and the value of indigenous and traditional knowledge, innovations and practices. CHIEHA has now secured representation on the National Expert Working Group on Access and Benefit Sharing (ABS). They are particularly involved in designing ABS co-management models that engage the private sector, NGOs, communities and government in policy development to protect traditional Indigenous Knowledge Systems and Technologies, *sui generis* law and the Convention on Biological Diversity’s Code of Conduct for undertaking research in local and indigenous communities. A key principle underlying CHIEHA’s work is empowering communities to understand the policies they are both influenced by and seeking to influence. Community-driven capacity development processes include the Transfrontier Parks and Protected Areas Rural Communities’ Network—a regional network facilitating knowledge exchange between South African, Mozambican and Zimbabwean GLTP communities—and the development of community-led training programs on ABS and community enterprise development.

Effective mechanisms to facilitate community engagement in decision-making processes will require that policy-makers and community representatives relate to and understand one other. Campbell (1994) highlights the profound value of high-profile, committed political leaders that understand and are committed to supporting grassroots initiatives. Genuine dialogue and partnership has to be based on equitability, trust and mutual respect, in forms and languages that resonate with all partners. In turn, community representatives may require support to relate their expertise to the broader policy context, to strengthen their advocacy and negotiation capacity.

Legislative and policy frameworks that enable community-led ecoagriculture

Without legislation and policy frameworks that enable local communities and small-scale producers to own and derive benefits from their resources, their willingness and capacity to implement ecoagriculture is severely compromised. As a foundation, policies are required that recognize the resource and intellectual property rights of communities, and afford them both decision-making and management authority over their resources. The last two decades have seen significant progress in establishing international precedents recognizing the rights of local communities to manage their own natural resources, whether for agricultural production or conservation. Article 8(j) of the CBD calls for Parties to respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities, promote their wider applications with the approval of knowledge holders and encourage equitable sharing of benefits arising. The Durban Accord of the 2005 World Parks Congress emphasizes the need for local communities to share both the costs and benefits of living close to Protected Areas, and for governments to institute participatory mechanisms that engage communities in identifying, creating and managing Protected Areas. The United Nations Declaration on the Rights of Indigenous Peoples (June 2006) (UN Human Rights

Council 2006) emphasizes the need to “respect indigenous knowledge, cultures and traditional practices, and their contribution to sustainable and equitable development and proper environmental management”.

The effectiveness of these international precedents remains contingent on the political will to translate and enforce them within national level legislation. Many international policies supporting community action in natural resource management are soft policies – optional, not obligatory. Even leadership in setting national-level conservation precedents is insufficient if contravened by contradictory trade, development and production policies. Another frequent obstacle has been the failure of national legislation to recognize customary tenure systems, including community-conserved areas, or local or indigenous communities as legal entities. Thus collective rights and responsibilities can not be accommodated under national legislation (Borrini-Feyerabend et al. 2004). Legal recognition and secure ownership rights are required with respect to customary laws and traditions, ancestral lands, domains and resources, including air, water and seed supplies, within and beyond designated Community Conserved Areas. Legislation is also required to protect intellectual property rights, accompanied by mechanisms that ensure the Free Prior Informed Consent of communities is obtained before any development initiative is undertaken on their land and that facilitate equitable Access and Benefit Sharing from resources utilized.

Political will is also required to ensure that policy-/decision-making is decentralized to the most appropriate level, and co-ordinated with the allocation of funding to allow policies to be operationalized. As Borrini-Feyerabend et al. (2004) note, policy decision-making seeking to decentralize resource management responsibility to communities is rarely co-ordinated within processes responsible for allocating public financing to support community management. Thus, communities may receive project financing but lack authority to manage, or vice versa. This is exemplified by experiences within the Philippines,

where national legislation sets promising precedents through the 1997 Indigenous Peoples Rights Act – the first law within Asia to comprehensively recognize indigenous peoples' rights with respect to customs and traditions, ancestral lands, domains and resources, including air, water and land, customary laws, and educational institutions etc. Yet the experience of the Philippines' Landcare movement (Catacutan and Cramb 2006) highlights the challenges of operationalizing such policies. The government's recognition of rights and emphasis on devolving decision-making authority is supportive of grassroots initiatives. But the government was unable to provide the necessary resources to support the mobilization of grassroots initiatives on a scale that would generate nationally-significant improvements in rural livelihoods or natural resource management practices.

Conclusions

Collective action by local communities and farmers is essential to sustain or develop ecoagriculture landscapes that jointly deliver conservation and livelihood benefits, and will be fundamental to achieving sustainable rural development, realizing the Millennium Development Goals and implementing multi-lateral environmental conventions. Through strategies that explicitly support such grassroots ecoagriculture initiatives, decision-makers at international, national and district levels can reconcile sector-based goals with the integrated strategies needed to deliver them on the ground. Such strategies must be flexible enough to support different models of community-led change in different local contexts. Such an outcome can only be achieved if farmer and community organizations are fully valued and engaged equitably as partners in decision- and policy-making processes.

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