



Ecosystems, Climate Change and the Millennium Development Goals (MDGs)

Scaling Up Local Solutions

A Framework for Action

Working Paper
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Key Messages

- **Ecosystem decline and climate change together are altering the rules of development, bringing a new urgency to the MDG agenda.** Because ecosystem services typically account for a substantial portion of the incomes of the rural poor, current trends in ecosystem decline threaten the very basis of their household economies. Climate change will place additional stresses on ecosystems and further intensify the challenges facing the rural poor, undermining efforts to accelerate and sustain progress toward the Millennium Development Goals (MDGs).
- **To meet this confluence of threats and attain the MDGs, rural development strategies will have to adjust.** Effective strategies must enhance the livelihood opportunities of the rural poor while sustaining the ecosystem services on which they depend; must be able to achieve sufficient scale to have a broad effect; and must be designed to increase economic, social, and ecological resilience to climate change.
- **Three decades of development experience has shown that action at the local level—with local organizations as key actors—underpins the success and sustainability of most environment and development initiatives.** Poverty reduction strategies and climate change interventions can't succeed without being rooted in the perspectives, capabilities, and actions of local organizations.
- **Local ecosystem-based initiatives have a demonstrated potential to generate economic, social, and environmental benefits for the participants.** There is a direct relationship between the health of ecosystems and the opportunities of the poor to build assets, increase their food security, improve their health, reduce risks, and have more secure lives—in short, to achieve the MDGs.
- **Scaling up such local ecosystem-based initiatives is necessary if they are to achieve sufficient impact.** This requires effectively channeling resources and developing capacity at the local level, combined with supportive policy and institutional reforms at higher levels.
- **Now is the time to act on the potential of local action and to tackle the challenge of scaling up successful ecosystem-based approaches to poverty reduction and the threats of climate change and ecosystem decline.** Interest in local approaches is growing; funding for local efforts at climate change adaptation is increasing; and the international community has renewed its commitment to achievement of the MDGs. A joint effort to provide the enabling conditions for scaling up local ecosystem-based initiatives could be an effective route to localizing the MDGs, sustaining ecosystem services and biodiversity, and improving rural adaptation to climate change.
- **An action framework to scale up local ecosystem-based initiatives should include five key elements.**
 - *Forging an enabling policy environment* that provides the poor with secure resource rights, market access and fair regulations, and a voice in local and national decision-making.
 - *Building local capacity and providing support services*, to ensure that local groups have the skills and support they need to sustainably manage local ecosystems and run successful enterprises.
 - *Ensuring equitable access to finance, from both traditional sources and from emerging sources of environmental and climate finance*, so that local groups have sufficient investment and operating capital to carry out their plans.
 - *Facilitating learning and knowledge sharing*, in order to share best practices, speed up the innovation cycle, and to inform policymakers and policy processes.
 - *Adopting a programmatic approach to scaling up* that goes beyond a project-by-project focus to adopt a comprehensive and coordinated effort among government, NGOs, international development agencies, and the private sector to foster the enabling conditions for scaling.

Introduction

The growing and increasingly interconnected global threats of ecosystem decline and climate change will profoundly test the ability of the rural poor to maintain viable livelihood options and to escape poverty—undermining and possibly even reversing progress toward achieving the Millennium Development Goals (MDGs).

Yet, this time of challenge for rural communities is also a time of opportunity. Local-level approaches to managing ecosystems have shown great promise in increasing the ability of communities to generate new economic options, meet environmental threats, and adapt to climate change. Evidence from many local ecosystem-based initiatives and enterprises shows that investing in the environment makes strong economic sense, producing income benefits and employment opportunities that enhance the rural economy and reduce poverty¹. The social and environmental benefits of community-driven ecosystem initiatives are just as significant—from greater empowerment and social mobility to more stable and productive ecosystems². Greater climate resilience can result from the sustainable farming, fishing, forestry and grazing practices that form the core of ecosystem initiatives, reducing the poor's vulnerability to climate change³. Given these multiple benefits, scaling up local approaches to ecosystem management and enterprise represents one of the most promising routes to accelerating and sustaining achievement of the MDGs (Figure 1)⁴.

However, for locally-driven solutions to ecosystem decline, climate change and poverty to be truly significant on a national or global scale and therefore useful as a path to MDG acceleration, they must be scaled up, both by increasing the number of such initiatives and by increasing the size and efficacy of individual initiatives. Successful scaling requires an enabling environment that is all too often absent today. Critical enabling conditions for local action include secure resource rights, a regulatory environment that is friendly to small enterprises, access to adequate financing and support services, and opportunities for capacity development, learning and knowledge sharing⁵. Bringing about such an enabling environment will require changes in the governance of natural resources, development of a robust financing infrastructure, and a coordinated program of support services—actions that will take the concerted effort of both local, national, and international actors.

This working paper sets out a framework for action to bring about such an effort. Its thesis is that local actors are the most effective drivers of change at the local level, and that empowering local organizations to carry out their own initiatives is the starting point for local solutions to poverty and environment challenges.

Figure 1 | Scaling up nature-based solutions to achieve the MDGs



The Challenge

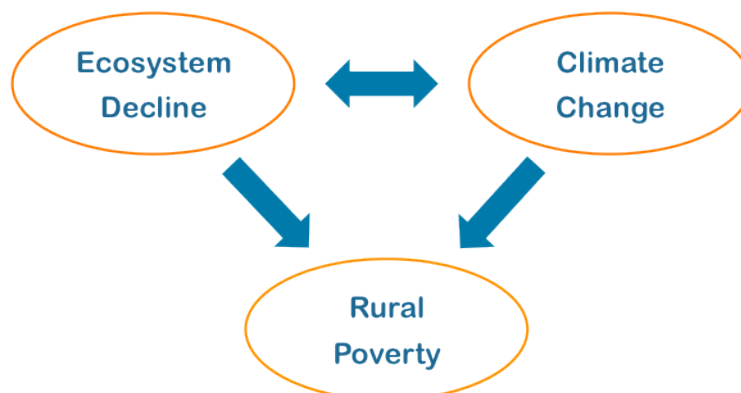
Ecosystem Decline, Climate Change and the MDGs

Ecosystem degradation and climate change are a growing threat to the livelihoods and well-being of the rural poor and their ability to lift themselves out of poverty, and will undermine efforts to accelerate and sustain progress toward the MDGs (Figure 2).

Ecosystem decline threatens the very basis of the household economies of the rural poor. Healthy ecosystems and the services they provide are among the most important assets of the rural poor. This includes the provision of goods such as fresh water, fish, wild foods and other non-timber forest products, as well as services such as plant pollination, pest control, climate regulation, and flood control. For the more than two billion rural farmers, fishers, pastoralists, and forest dwellers living on less than \$2 per day, ecosystem services typically account for a substantial portion of family income—as much as half or more in many instances⁶. For example, recent research from India shows that ecosystem services contribute up to 57 percent of the GDP of the poor in the study area⁷. Yet, despite their critical importance, ecosystems are being degraded at alarming rates. The 2005 Millennium Ecosystem Assessment found that 15 of the 24 ecosystem services that directly contribute to human well-being are being systematically degraded through human use. The Assessment concluded that “any progress achieved in addressing the goals of poverty and hunger eradication, improved health, and environmental protection is unlikely to be sustained if most of the ecosystem services on which humanity relies continue to be degraded.”⁸

The emergence of global climate change will place additional stress on ecosystems and further intensify the challenges facing the rural poor. According to the International Panel on Climate Change, “For increases in global average temperature exceeding 1.5-2.5°C and in concomitant atmospheric carbon dioxide concentrations, there are projected to be major changes in ecosystem structure and function, species’ ecological interactions, and species’ geographical ranges, with predominantly negative consequences for biodiversity and ecosystem goods and services.”⁹ Climate change is becoming more evident and its expected repercussions – including worsening droughts, crop failures, water shortages, rising sea levels, and more frequent and intense storms – are already impacting countries. The rural poor, who often live in ecologically fragile areas, are particularly vulnerable. They are the most exposed to climate change impacts, and have more limited coping mechanisms and capacity to recover.

Figure 2 | The triple challenge



Because of their reliance on ecosystem services, the combined effects of ecosystem decline and climate change will fall hardest on the poor. The lack of assets and opportunities that define poverty increase the vulnerability of the poor to a shrinking and less reliable natural resource base. Unlike more affluent families, the poor often cannot replace lost ecosystem services by changing jobs or falling back on savings. Particularly hard hit will be the poor who rely for income on the "commons"—those areas where natural resources are accessed by many users simultaneously and pressures on the resources are already high. Strengthening the resilience of people and ecosystems and their ability to adapt to climate change will be a major development challenge in the coming decades.

Reshaping Development Strategies to Tackle the Triple Challenge

Ecosystem decline and climate change together are altering the rules of development and development aid, and bring a new urgency to the MDG agenda. Development strategies to overcome rural poverty will have to adjust to the growing confluence of these large-scale trends and the challenges they present. They must be:

- growth strategies that enhance the livelihood opportunities of the rural poor while sustaining the ecosystem services on which they depend;
- capable of achieving sufficient scale to have a broad and sustained impact;
- designed to increase economic, social and ecological resilience to climate change.

Empowering local organizations and action

Three decades of development experience has shown that action at the local level—with local organizations as the key actors—underpins the success and sustainability of most environment and development initiatives. Case histories demonstrate that poverty reduction strategies and interventions—and now efforts to mitigate and adapt to climate change—rarely succeed without being rooted in the perspectives, demands, capabilities, and actions of local organizations. Local groups can be particularly effective development partners because they are embedded in the community social order and understand local livelihood strategies centered on ecosystems and the services they provide. While national-level policies and institutions tend to view poverty and environment as separate issues, many local organizations see the inherent connections and treat them together. In this sense, they provide a critical entry point for building a vital 'green economy' at the village level that can deliver substantial development benefits. Recognizing and building on the roles and strengths of local organizations is the kind of change in emphasis that is needed to reinvigorate efforts to achieve the MDGs¹⁰.

However, any strategy to tap the potential of local action must reckon with the considerable challenges involved. Creating an enabling environment for local action—an environment that provides the rights, financing, and capacity development necessary to support the formation and scaling up of successful ecosystem-based solutions—is no easy task. It will require patience, persistence, a shared vision of what can be accomplished, and a significant commitment of resources over time. It will also require a commitment to advance our understanding of the science and practice of building ecosystem and climate resilience through targeted research.

The Opportunity

Local Solutions to Grow the Environmental Wealth of the Poor

There is a direct relationship between the health of ecosystems and the opportunities of the poor to build assets, increase their food security, improve their health, reduce risks, and have more secure lives. Community-based approaches to managing ecosystems have shown great promise in “localizing” the MDGs (Box 1). When ecosystem-based initiatives arise from local imperatives and are controlled by local groups, they have the potential to generate considerable economic, social, and environmental benefits to group members (Box 2) and, if structured properly, to distribute them equitably. These benefits can help to mitigate the array of threats facing rural communities by improving the health of local ecosystems, generating new income sources and markets, and providing a venue for collective action in pursuit of shared goals¹¹.

The magnitude and significance of these benefits varies widely. In some cases, benefits may be so substantial they allow a family to rapidly improve its economic and social standing, for example, if an initiative creates employment opportunities where none existed before. More typically, benefits are incremental in their effects, reducing economic vulnerability and increasing social connections. However, even if they are small in magnitude, benefits will be significant in the context of the household economy if they allow a family to accumulate assets, become less socially isolated, obtain more secure access to critical natural resources or markets, or pay for something previously out of reach, such as school fees.

Box 1. What are local ecosystem-based initiatives?

- A local ecosystem-based initiative is a set of activities undertaken by a local group to generate a sustained stream of benefits from one or more ecosystem services. Generally, such initiatives involve collective action, where members of the initiative work together to sustainably manage the ecosystem.
- The range of local ecosystem initiatives is broad—everything from the efforts of small forest user groups and fishing cooperatives to internationally marketed ecotourist lodges operated by local groups. Not all are enterprises per se. Many are joint efforts to manage resources—such as water, fish, or forage—that are then used by individuals for livelihood purposes.

Such benefits are clearly relevant to the goals of poverty reduction and greater environmental sustainability expressed in MDG1 and MDG7, but they support the achievement of other MDGs as well. For example, many local ecosystem-based initiatives are intended to facilitate small-scale agriculture through better soil management and harvest techniques and through improved markets and connections—issues directly relevant to increasing local food security and diet. Successful initiatives frequently facilitate local infrastructure projects, such as water and sanitation systems, schools, and health clinics—activities that directly support education and health goals. In addition, a frequently cited use of initiative-generated income is payment of children’s school fees. Ecosystem-based initiatives are typically quite inclusive of women, and many are women-led. This contributes to the kind of economic independence and empowerment envisioned in MDG 3. Taken together, the benefits of initiatives offer multiple and integrated routes to support the suite of MDGs¹².

Box 2 | Benefits of local ecosystem-based initiatives

- **Economic benefits** generally manifest as an increase in household income, either as cash income (from sales of ecosystem products or services, or from employment associated with the initiative) or subsistence income (food, forage, or materials consumed directly to support daily needs).

In northern Bangladesh, 110 fishing communities bordering the Hail Haor wetland entered into an agreement with the Bangladesh government to sustainably manage local fishing grounds, depleted through overuse and habitat destruction. After forming local management committees, villagers imposed conservation measures and harvest restrictions, including the establishment of no-fishing sanctuaries, reduction of fishing effort, replanting of wetland trees, and restocking of native fish. After seven years, average daily household incomes had climbed 30 percent, annual fish production had risen 140 percent, and fish consumption by the local population had increased over 50 percent, improving family nutrition¹³.

- **Social benefits** include personal empowerment and increased social mobility associated with greater income potential and the acquisition of new skills. They also include group benefits such as an increase in social capital among initiative members as well as greater inclusiveness.

In Brazil, the Yawanawa, an indigenous community living deep in the Amazon rainforest, established the Yawanawa Agro-extractive Cooperative to generate income from their forest resources. They began by selling pigment from the native urukum fruit for use as a cosmetic coloring agent, but soon branched into licensing the traditional art designs of the community, marketing a line of unique clothing, and recording traditional folk songs. These combined activities have created a sustainable income stream that has reduced out-migration and strengthened local indigenous culture and identity¹⁴.

- **Ecological benefits** include increased ecosystem productivity and stability, restoration of functions diminished by earlier unsustainable practices, enhancement of biodiversity, and carbon storage, among others.

In Guatemala's remote Maya Biosphere Reserve, the government has granted 13 communities the right to sustainably harvest timber in the Reserve's "multiple use zone." In the areas where these small forest enterprises hold sway, deforestation has fallen markedly and, as of 2007, was twenty times lower than in neighboring protected areas, where illegal logging is widespread. The frequency of forest fires has also dropped dramatically. Studies show that forest structure has been maintained and biodiversity remains high in the community-managed areas¹⁵.

- **Resilience and adaptation benefits** are also produced. By improving local ecosystem health, successful initiatives increase the ecosystem's ability to handle environmental shocks and stresses such as climate impacts. For example, in forest ecosystems, retaining plant diversity can stabilize the ecosystem and make it less vulnerable to extreme weather events and pest damage. In agroecosystems, sustainable farming practices such as contour tilling, agroforestry, organic agriculture, and the use of vegetative buffers can stabilize soil structure, increase fertility, and raise the soil's water holding capacity. This, in turn, can increase productivity and decrease vulnerability to high-intensity rainfall, floods, and droughts¹⁶.

At the same time, by increasing the economic options, learning skills, and social cohesion of the group, ecosystem initiatives also raise the group's economic and social resilience and its ability to adapt to changes which may be unavoidable by reconfiguring its activities. Taking part in an ecosystem-based initiative often translates into a greater willingness to work collectively toward new solutions, try new technologies, and undertake joint research with other groups. These adaptive behaviors reduce the risks of innovation and spread best practices more rapidly—increasing the pace of adaptation¹⁷.

A Framework for Action

Scaling Up Local Solutions to Widen Impact and Accelerate MDG Progress

Although the central role of ecosystem services in improving rural livelihoods and meeting the MDGs is better recognized today, there remains a wide gulf between this recognition and the ability of the poor to parlay their environmental assets into development gains. All too often, local actors have to overcome barriers that inhibit community-driven nature-based enterprises and other local approaches to enhancing livelihoods through better ecosystem management. Effectively channeling resources and developing capacity at the local level—combined with supportive policy and institutional reforms at higher levels—is necessary if locally driven solutions to ecosystem decline, climate change and poverty are to achieve sufficient scale and impact. Locations where considerable scaling has occurred show that such initiatives can bring landscape-level change to ecosystems, create a social ferment that spreads among communities, and reshape local economies¹⁸. Indeed, successfully scaling local solutions offers one of the most promising avenues to achieving greater aid effectiveness¹⁹.

Tackling the scaling up challenge means isolating these enabling conditions and then systematically providing the governance reforms, financing, and capacity development required to spread these conditions widely. Actions at the local, national, and international level are all required: from community-based organizations; local and national governments; international development agencies; local, national and international NGOs; and the private sector. A framework for these actions can be drawn from the significant record of case studies, analytical research, and on-the-ground experiences compiled over the years on local nature-based initiatives and community-driven development more. Based on this record, an action framework should include five key elements (Figure 3):

- Forging an enabling policy environment;
- Building local capacity and providing support services;
- Ensuring equitable access to finance;
- Facilitating learning and knowledge sharing; and
- Adopting a programmatic approach to scaling up.

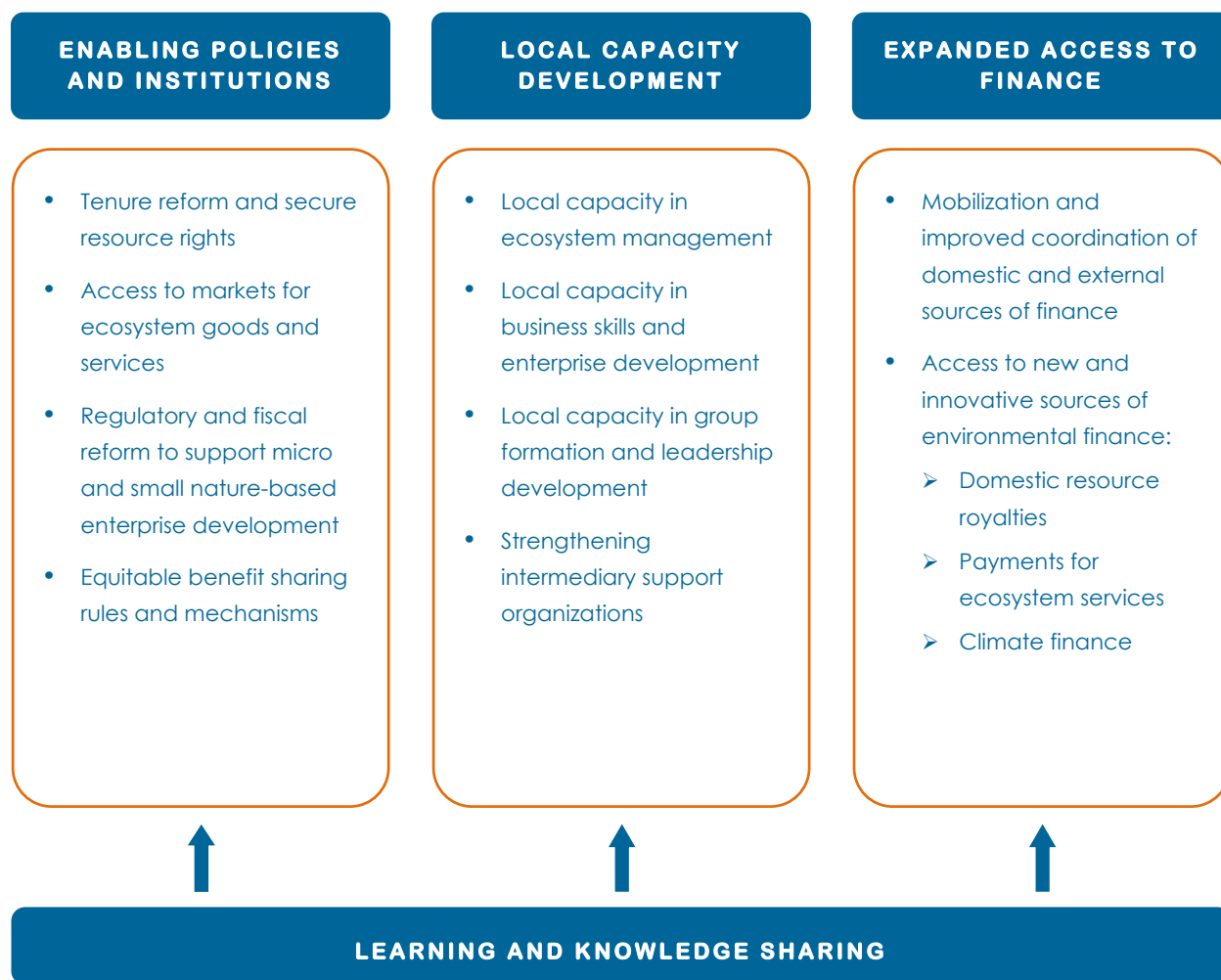
Forging an Enabling Policy Environment

Success at the local level requires supportive policies and institutional reforms at the national level that remove barriers to, and provide the enabling conditions for, growth and scaling up. Without the presence of enabling conditions such as secure resource tenure, market access, and a friendly regulatory environment, local ecosystem-based initiatives cannot make the most of their natural resources or succeed commercially.

Resource rights

Secure resource rights are necessary to create the basic incentive for a local ecosystem-based initiative. Such tenure rights assure that the benefits from ecosystem management will accrue to initiative members, and not be appropriated by others. Today, lack of clarity surrounding resource tenure is common, manifesting as lack of legal title or conflicts between customary tenure systems and state-recognized tenure. Lack of tenure security is thus one of the first and most significant barriers that local initiatives based on ecosystem use face.

Figure 3 | An action framework for scaling up nature-based solutions



There is no generic formula for tenure reform. However, for a tenure system to significantly improve resource security for ecosystem-based initiatives a few principles can be identified. First is the need to explicitly recognize local customary land rights, including communal tenure, since such rights are still in common use. Second is the need to deal with the particular tenure challenge of initiatives that take place on public domain lands—state forests, fisheries, or grazing lands. In this case, clear and legally binding co-management agreements between initiative members and the state are a priority. Finally, there is the necessity for developing a functional dispute resolution mechanism that can link the existing customary and statutory tenure regimes in a common framework that allows conflicting land and resource claims to be settled²⁰.

Market access and fair regulations

Resource rights alone are not sufficient. Access to markets for ecosystem goods and services is also required. Unfortunately, rural economies are frequently dominated by cartels and plagued by patronage and other uncompetitive behaviors that restrict market access. Greater attention to enforcing basic competition laws and reducing the incentives for natural resource patronage would go far to remove the most obvious barriers to small nature-based enterprises²¹.

Unfavorable resource regulations, taxes, and licensing requirements can also restrict market access and place a heavy financial burden on initiatives. Many of these regulations and taxes are designed with larger producers in mind, creating a significant bias against small enterprises. Research on small forest enterprises, for example, has shown that the costs and specialized knowledge required to submit complex management plans and obtain expensive harvest permits are major obstacles to market entry²². Resource quotas, permit and license systems, and tax regimes also provide a convenient route for those with political influence or money to subvert the system and monopolize resources.

Lowering the aggregate burden of taxes and regulatory costs and simplifying permitting and planning procedures would boost the financial viability of initiatives. At the same time, increasing the transparency of granting licenses, harvest quotas, and resource concessions could reduce their use as sources of patronage.

Building Local Capacity and Providing Support Services

Case studies suggest that the success of a local ecosystem-based initiative depends less on the biological potential of the ecosystem than on the human potential of the group undertaking the initiative—its complement of skills and capacities. Many different capacities—technical, business, social, and institutional—are necessary to manage an ecosystem for sustained benefits and distribute these benefits equitably. Providing for the consistent development of these capacities is one of the most effective ways of helping to establish and sustain ecosystem-based initiatives²³. In addition, providing support services that the initiative can't provide for itself is also necessary, and such support may need to continue for some time.

Local capacity development

Lack of capacity in one or more critical skills is a common problem for initiatives, particularly in the beginning before much experience has been accumulated. Thus, opportunities for significant capacity development are essential. Experience shows that effective capacity-building is hands-on, interactive, and long-term, rather than occasional one-off training sessions.

While the need for technical and business capacities is often well-recognized, the development of social capacities, such as the ability of the group to plan and work together and resolve conflicts, is just as critical to success. Indeed, the group's social capacities are in some ways more critical and more difficult to develop. Without the ability to work together toward a common goal through difficult times, a local ecosystem-based initiative is not likely to succeed.

Strong leadership at the community level is also an essential capacity. A good leader can articulate a vision that inspires members of the effort, present available options for action, and convince initiative members to follow through on their commitment.

Support services

Many specialized services are not ordinarily—and may never be—within the competency of initiative members, and call for outside support. These may include legal counsel, tax advising, financial and business planning, or certification services for organic and sustainably-sourced product labeling. These services may be essential to enable an initiative to accomplish its work, gain legal recognition, or to enter specialty markets.

To supply both capacity building and support services a number of different organizations—some local and others not—are required. Government agencies, civil society groups, and international organizations all have roles. The challenge lies in coordinating these services and making sure they remain available as the ecosystem initiative matures.

One class of service providers is especially valuable to ecosystem initiatives because they provide a single source for a number of strategic and technical services, and are especially adept at capacity-building. These so-called *intermediary support organizations* are not local organizations per se, but often have their roots at the local level because they started there. Instead, they operate in the space between the state and the local level, using their extensive network of contacts and their experience in organizing local groups to help initiatives come to a group consensus on action and then to connect with the services and learning opportunities they need²⁴.

Another crucial strength that these intermediary organizations bring is their ability to construct bridges to those in government agencies—bridges that can help dissolve bureaucratic barriers and route government financial and technical support to the fledgling initiative. Due to their effectiveness, encouraging the development of such intermediary groups is one of the most important ways that development agencies and governments can support the growth and scaling up of ecosystem initiatives.

Ensuring Equitable Access to Finance

Access to adequate finance is an additional enabling condition—one so important that it requires special attention. Scaling up local ecosystem-based initiatives will clearly call for greater access to domestic and international finance than is currently available, including new and innovative sources of 'environmental finance.' On the positive side, potential opportunities and sources of finance for local development initiatives are growing. But the downside is that the financing landscape is becoming more complicated and more difficult for local initiatives to navigate. In addition, financing local initiatives has often been hampered not just by insufficient funds, but by the lack of effective strategies and mechanisms for targeting and delivering funds to local actors. Solving the scaling problem requires action in both of these areas.

Sources of finance

No standardized source of funding for local ecosystem initiatives is available in most countries. To date, traditional grants from development agencies, government programs for rural development, or environmental NGOs have provided start-up funds for many such initiatives. However, such funds are quite limited and selection criteria for these grants vary widely.

Microfinance is also an important funding source, but in spite of significant expansion and the entry of commercial banks into the microfinance marketplace, availability remains limited and loan amounts are often inadequate to meet the needs of ecosystem initiatives.

Potential sources of new and emerging environmental finance for local initiatives include:

- *Domestic resource royalties:* As highlighted in recent work on Environmental Fiscal Reform, revenues from logging, fishing, and grazing concessions and oil and mining royalties could provide an appropriate source of finance for ecosystem-based initiatives in the communities where these resources were extracted.
- *Climate finance:* Even in the absence of a global agreement on climate change there is likely to be a substantial increase in the funds available to support climate mitigation and adaptation. The Adaptation Fund is one existing source of such finance. In addition, there has been a growing focus by the international

community on supporting adaptation that is community-based (CBA). Given their ability to increase the climate resilience and adaptive capacity of rural groups, ecosystem initiatives should be well placed to take advantage of such funds.

- *Payments for ecosystem services*: PES programs, particularly those related to water and climate regulation services, are gaining in credibility. Negotiations over a REDD+ program are perhaps the most visible example of the potential significance of PES as a source of local development funding.

Delivery mechanisms

Once funds are available, an appropriate delivery mechanism is required. Such a mechanism must deliver program and project funds to qualified local groups equitably, efficiently, and in a manner that reflects local priorities.

Establishing and applying appropriate selection criteria remains one of the most significant challenges for such a mechanism. The need for a decentralized approach that can accommodate the number and diversity of local groups makes this a particularly daunting task—a task that both national governments and international organizations have struggled to succeed at.

One successful mechanism that may provide a model for scaling up local finance is the UNDP-GEF Small Grants Programme (SGP), which has a decentralized governance structure in which funding decisions in each country are made by National Steering Committees composed of a mix of stakeholders from civil society, academia, government, and the private sector. Lessons from the experience of National Environment Funds may also provide insights into how to channel funds to the local level²⁵.

Facilitating Learning and Knowledge Sharing

Increasing the opportunities for learning and knowledge-sharing between local ecosystem initiatives can greatly increase their chances for success. Learning networks and information exchanges can help counter the physical isolation initiatives often face, providing a platform for sharing best practices, tackling common challenges, communicating lessons learned, and undertaking joint research. Communication and knowledge-sharing between initiatives and policymakers is also crucial to inform policymakers of the benefits of initiatives and the challenges they face, solicit their political and financial backing, and gain access to support services and technical assistance. Finding the most effective strategies and platforms for such exchanges is essential to promote rapid scaling of successful initiatives.

Identifying knowledge-sharing platforms and partners

Experience shows that effective learning networks can significantly reduce—by half or more—the uptake time of a best practice or new technology by allowing initiative members to learn from the mistakes of others in similar conditions²⁶. Knowledge-sharing and communication can take a variety of forms, from face-to-face exchanges or site visits, to periodicals or radio broadcasts, to web-based learning networks and best-practice exchanges, each with different costs, technology requirements, and time requirements. Reducing the cost and technology barriers to the use of these modes is a critical concern in fostering their increased use.

Learning exchanges foster innovation and experimentation and increase the adaptive capacity of an ecosystem initiative—its ability to respond to challenges in positive ways that allow the group to continue to meet its goals. Greater adaptive capacity through learning networks can translate directly to greater climate resilience. Although new technologies such as the internet have become essential communication tools and have greatly

expanded the range of topics and participants in knowledge exchanges, recent research has confirmed the value of traditional information exchanges, such as cooperatives and extension programs that can act as trusted information intermediaries. A commitment to developing appropriate knowledge sharing among initiatives and between initiatives and policymakers requires seeing these traditional institutions in a new light and helping them to develop into modern partners in learning and information exchange.

Adopting a Programmatic Approach to Scaling Up

While many of the success factors and enabling conditions behind productive local ecosystem initiatives are known, they have not been applied systematically and widely to scale up such initiatives and accelerate progress toward the MDGs. To do so will require a more comprehensive and coordinated effort—a programmatic approach undertaken at the national level that goes beyond the conventional project-by-project focus to adopt an integrated strategy to foster the conditions necessary for local ecosystem initiatives to achieve significant scale. An effective program to support scaling must also include targeted research to better quantify the benefits of local initiatives and develop metrics to measure performance and promote the learning cycle of best practices.

Key elements of a country-led programmatic approach

Elements of a programmatic approach could include:

- A *targeted policy reform agenda* that identifies the most urgent policy shifts—such as tenure or regulatory reform—necessary to promote scaling and charts a staged strategy to achieve these reforms.
- A *central finance platform* that offers ecosystem initiatives access to the various available forms of finance.
- A *clearinghouse for support services* to ensure that these services—including capacity development—are accessible and coordinated.
- *Coordination and support of communication and knowledge exchange platforms* to maximize interconnection and speed the learning cycle.
- *Monitoring, assessment, and analysis* to ensure accountability and finance efficiency, and to promote learning and the development of best practices.

An effective program for scaling recognizes that, while government is a key player in the scaling process, many other actors, such as NGOs and international development organizations, are essential partners in the effort, making the coordination of the efforts of these various actors a key task.

Filling knowledge gaps—the research agenda

While the record of experience and the literature concerned with local ecosystem-based initiatives stretches for more than three decades, rigorous research on many aspects of these initiatives has been infrequent, leaving many important questions unanswered. High-priority research could include:

- *Quantitative analysis of ecosystem initiative benefits.* Such an analysis is needed to better understand the potential for economic growth, social development, and poverty reduction that such initiatives offer, giving them greater credibility in mainstream planning processes.
- *Metrics development,* including metrics for project and program performance; local organization performance; finance effectiveness; and the presence of enabling conditions.

- *Applied studies on the promotion of ecosystem resilience.* This would include continued development of the basic science behind ecosystem functions.

Conclusion

Now is the time to act on the potential of local action and to tackle the challenge of scaling up successful ecosystem-based initiatives. Such initiatives are well-suited to the rural development challenges of the day because they address the combined threats of biodiversity loss, ecosystem decline, and climate change while effectively localizing and advancing the MDGs. Local approaches have gained interest and credibility in the last decade as a complement to top-down development strategies. In addition, more resources are likely to become available for community-based interventions as the urgency for climate change adaptation rises and the MDG deadline of 2015 approaches.

To capitalize on this moment, action from many different quarters will be necessary. Governments can empower local communities by continuing the responsible devolution of resource rights and responsibilities to the local level and by emphasizing the role of government agencies in supporting and developing local capacities [rather than directing the details of local initiatives]. Donors and international development agencies can build local approaches into their efforts to increase aid effectiveness, and can directly contribute to scaling by emphasizing knowledge-sharing efforts and South-South exchanges, recognizing the need to connect local initiatives to each other and to sources of policy and financial support. The NGO community—and especially NGOs that function as intermediary support organizations—can act as a bridge between local communities, government, and international organizations, essentially localizing the capacity building and support services that initiatives need. Meanwhile, private sector actors can provide new business models suitable for small nature-based enterprises, and reconfigure value chains and markets so that these small businesses can succeed.

Successful scaling of local ecosystem-based initiatives is a logical extension and culmination of current efforts—by the Poverty Environment Initiative and others—to mainstream a consideration for ecosystem services in national development and economic policies. If sustainable natural resource use is to become a reality, local people as the primary day-to-day users—and chief stewards—of local ecosystems, must drive this change. In the same way, the critical actions needed to achieve the MDGs will have to come from local organizations who are in a position to deliver services where they are needed. Embracing the action agenda set out in this paper will provide the enabling conditions to release this local potential, freeing local groups to succeed in crafting their own solutions to the poverty and environment challenges they face.

Key Resources

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Communities, Conservation and Markets (<http://www.ccmproject.org/>).

Strategies, tools and knowledge networks that integrate sustainable agriculture and land management with conservation of biodiversity and ecosystem services.

Equator Initiative (<http://www.equatorinitiative.org/index.php>).

Prize-winning examples of community efforts to reduce poverty through ecosystem-based initiatives; also a platform for knowledge-sharing among such local initiatives.

EnterpriseWorks/VITA (<http://www.enterpriseworks.org/>).

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