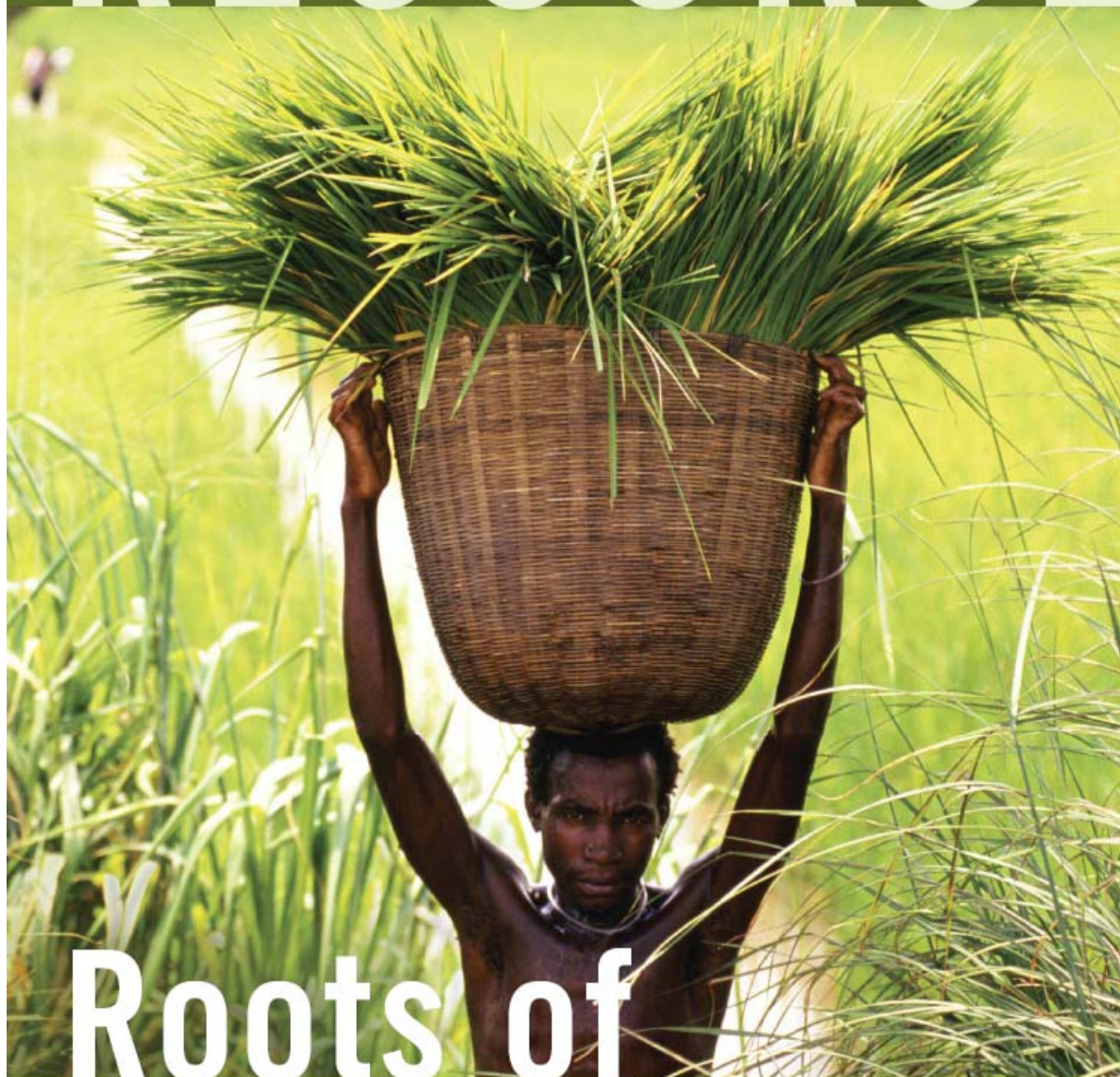


A Guide to **WORLD RESOURCES**

2008



Roots of Resilience

Growing the Wealth of the Poor
OWNERSHIP · CAPACITY · CONNECTION



THE WORLD BANK



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A Guide to **WORLD** **RESOURCES** 2008

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CREATING ENTERPRISE, FIGHTING POVERTY, FOSTERING RESILIENCE.

FOREWORD

THREE-QUARTERS OF THE WORLD'S POOREST CITIZENS – those living on less than \$2 per day—are dependent on the environment for a significant part of their daily livelihoods. Climate change, therefore, adds a real urgency to the efforts of the many institutions that work to improve the lives of the poor.

World Resources 2008 argues that properly designed enterprises can create economic, social, and environmental resilience that cushion the impacts of climate change, and help provide needed social stability. Increased resilience must be part of the response to the risks of climate change. The efforts that foster resilience chart the first steps on the path out of poverty.

What can we say with some certainty about environment and development as we approach the end of the first decade of the 21st century?





- The world is far wealthier; Brazil, India and China are emerging as new and influential economic powers. At the same time, however, wealth tends to be highly concentrated in a small percentage of the population worldwide.
- The Millennium Ecosystem Assessment of 2005 found that 15 out of the 24 major ecosystem services it assessed are being degraded or used unsustainably.
- We are already experiencing the initial consequences of climate change; the pace of these early changes, such as polar ice melt, is more rapid than any models had predicted.
- We have made commendable progress in reducing the number of people living in poverty, but that achievement has been limited to China and a handful of South Asian countries. The plain fact is that almost half the

world's population—2.6 billion people—continues to live on \$2 per day or less; one billion of them on \$1 per day or less.

- In spite of the news that as of 2007, we have become a predominately urban world, the reality of poverty remains geographical. Three-quarters of the poorest families live in rural areas; they still depend in large measure on natural resources for their existence; they remain vulnerable and their future insecure.

What we know well from successful case studies, and what this volume again argues is that any success in overcoming poverty takes time and persistence; efforts to address rural poverty are linked to natural systems and must abide by natural cycles. Yet time is a growing constraint as the early impacts of climate change emerge and their long-term effects become clearer.

Of equal concern is the fear that progress made over the past decades to overcome poverty may be at risk from the disruptive effects of climate change. This poses a dilemma for the development community: we must not only maintain but scale up our responses to such poverty, to reduce the economic vulnerability of the poorest at a time when many natural resources are being degraded.

World Resources 2005: The Wealth of the Poor examined the relationship between ecosystem management, good governance, and poverty reduction. In it we argued that poverty and the environment are inextricably linked, that the world's rural poor could enhance their livelihoods by capturing greater value from ecosystems.

Our thesis was that income from sustainably managed ecosystems can act as a stepping stone in the economic empowerment of the poor. But this could only happen when poor households are able to reap the benefits of their good ecosystem stewardship. Governance, in the form of tenure reform, can create the self-interest that leads to an improved natural resource base, be it agriculture, forestry, or fishing.

We believe the linkage among poverty, environment, and governance, and the promise it holds for the poor has even more currency today. In this book, we take a closer look at that linkage. We draw on a wealth of experience in community based natural resource management, much of it supported by the partners in this book.

We identify those elements without which the achievement of any permanent measure of improvement, of any promise of sustained growth, is greatly diminished. We explore three essential factors in some detail: community ownership and self-interest; the role of intermediate organizations (in providing skills and capacity); and the importance of networks—formal and informal—as support and learning structures. When these factors are present, resourceful and resilient communities can emerge.

Resilience is the capacity to adapt and to thrive in the face of challenge. This report contends that when the

poor successfully (and sustainably) scale up ecosystem-based enterprises, their resilience can increase in three dimensions: They can become more economically resilient—better able to face economic risks. They—and their communities—can become more socially resilient—better able to work together for mutual benefit. And the ecosystems they live in can become more biologically resilient—more productive and stable.

It is clear that in the coming decades, the rural poor will be tested as the impacts of climate change manifest. There are no cities in the developing world large enough or wealthy enough to absorb the migration of the poor who have no buffer against these dangers, and can find no means to adapt. The political and social instability inherent in such potentially massive movements of people is of increasing concern to the international community.

With the adoption of the Millennium Development Goals in 2000, and the increased attention given poverty with succeeding meetings of the G-8, a renewed and expanded commitment to overcoming poverty is slowly being put in place. There are big strategies being tested, and significant resources being expended, both by donor countries and by NGOs and philanthropic organizations.

We recognize that the concern for poverty extends to the serious problems of urban poverty as well. For this reason, we must continue to support responsible industrial development that generates jobs and opportunity, even as it lessens its burden of pollution. Such urban industrial growth has been a significant factor in East Asia's success over the last two decades in reducing poverty.

But for the rural poor, the challenge is different. Natural resources are still the mainstay of the rural economy. Nature based enterprises such as community forestry or ecotourism lodges offer the poor a way to use their ecosystem assets and gain business capacities that allow them to participate in an increasingly integrated and globalized economy. They provide the opportunity for diverse livelihood strategies.

And, as we move to reduce carbon emissions, there may well be additional economic opportunity for the rural poor through the mechanism of carbon markets, in which rural communities may receive compensation for carbon reduction or offset programs, such as storing carbon through community forestry projects.

Improved governance is the key. Giving communities the right to manage local natural resources themselves can be a critical catalyst for improving well-being.

Governments committed to end poverty should also begin to remove barriers to rural enterprises, such as lack of competitive markets, lack of transportation infrastructure, and lack of financial services. There is ready help in public and private institutions to assist in these tasks.

Most importantly, the concern over poverty must translate into a real and substantial effort to build the capacity of local organizations to manage natural resources and create viable enterprises. Scaling up such enterprises can provide a potent source of revenue for substantive rural development—the key to a better life for almost 2 billion of the world's poor.

To this imperative is now added the unease that comes from knowing that the time to get ready, the time to help millions prepare, is growing short. The consequences of not acting may well test the depths of our compassion.

Thirty-six years ago—in 1972—the nations of the world came to Stockholm for the first international conference on the human environment. The theme of that historic gathering was “Only One Earth.” It marked the onset of our awareness that we all share a common environment, a fact not fully appreciated then or for many years after. Today, the manifest reality of climate change and its certain impact on all of us, no matter how privileged, leaves no doubt as to that fact.

How we embrace that reality does now determine our common future.

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***Scaling up nature-based enterprises
offers a clear route to building
the resilience of rural communities.***



SCALING UP ECOSYSTEM ENTERPRISE

CHAPTER 1

NATURE IS AN ESSENTIAL YET elusive asset for the world's poor. It routinely provides subsistence livelihoods for poor rural households but little prospect for creating opportunity, wealth, and security—the foundations of well-being. This need not be so.

In *World Resources 2005* we showed that ecosystems can become the focus of a powerful model for nature-based enterprise that delivers continuing economic and social benefits to the poor, even as it improves the natural resources base. Evidence shows that poor rural families empowered with secure resource rights can significantly increase their income stream from nature with prudent ecosystem management. To make this possible, a fundamental shift in governance—in the power of the poor to access resources of value and build functional enterprises—is required.

The increase in “environmental income” that results from ecosystem-based enterprises can stabilize the household economies of the poor, translating into better nutrition and health, greater access to education, more opportunities for saving and investment, and reduced vulnerability to financial shocks. Social gains accompany these material gains, as the poor assume greater power to manage local ecosystems and become more active players in the local economy.

Our thesis is that successfully scaling up environmental income for the poor requires three elements: it begins with **ownership**—a groundwork of good governance that both transfers to the poor real authority over local resources and elicits local demand for better management of these resources. Making good on this demand requires unlocking and enabling local **capacity** for development—in this case, the capacity of local communities to manage ecosystems fairly. The third element is **connection**—establishing adaptive networks that connect and nurture nature-based enterprises, giving them the ability to adapt, learn, link to markets, and mature into businesses that can sustain themselves and enter the economic mainstream.

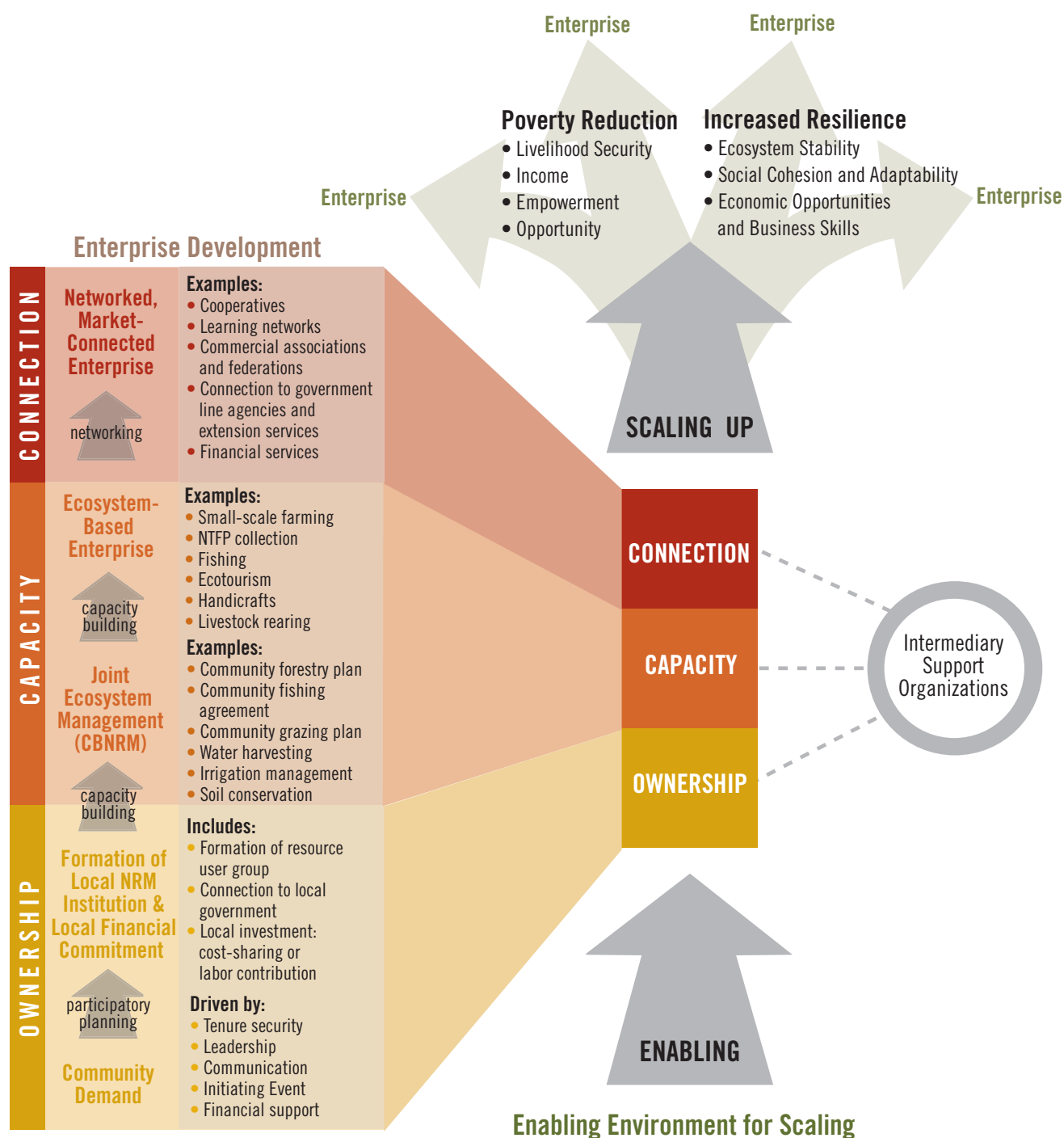
When these three elements are present, communities can begin to unlock the wealth potential of ecosystems in ways that actually reach the poor. In so doing they build a base of competencies that extends beyond nature-based enterprises and supports rural economic growth in general, including the gradual transition beyond reliance on natural resource income alone.

New research on the breakdown between rural and urban poverty shows that 75 percent of those who live on less than \$2 per day in developing nations live in the urban countryside—a higher estimate than many observers expected, given the continued growth of urban slums.

The persistence of poverty as a rural phenomenon emphasizes the importance of effective rural development models for scaling up poverty reduction. It also strengthens the case for ecosystem management as a necessary element of such development, since natural ecosystems are one of the principal assets of rural areas—an asset the poor already use extensively.



FIGURE: SCALING UP COMMUNITY-DRIVEN ECOSYSTEM ENTERPRISE



Supportive Policy Environment	Nondiscriminatory Tax and Regulatory Environment	Commitment of Government Line Agencies
Availability of Financial Services and Public Funding	Technical, Research, and Marketing Support	Communication of Successes

TABLE: SCALING UP ECOSYSTEM ENTERPRISE: KEY INGREDIENTS

Success Factors for Community-Driven Natural Resource Management

OWNERSHIP: A Local Stake in Development and Enterprise

- Enforceable resource rights
- Community demand for natural resource management
- Community investment of time, money, or other key inputs

CAPACITY: Social, Technical, and Business Skills to Manage Resources and Establish Enterprises

- Social capacity to embrace a shared goal for resource management and to negotiate an action plan to attain it
- Technical capacity to jointly manage natural resources sustainably, including the ability to monitor resources and enforce rules
- Business capacity to organize an ecosystem-based enterprise and market the resulting products and services
- Local resource management institutions with the capacity to distribute costs and benefits of ecosystem management fairly
- Dynamic community leadership to catalyze demand and mediate disputes
- Intermediary support organizations to help build capacity and influence

CONNECTION: Links to Learning, Support, and Commercial Networks and Associations

- Horizontal links to other rural producers to access information, improve efficiency, and connect to markets
- Vertical links to government and the private sector to build political support, deal with bureaucratic obstacles, and connect to technical and financial support

An Enabling Environment for Scaling

SUPPORTIVE POLICY ENVIRONMENT

- Secure resource rights and fair benefit-sharing arrangements
- Progressive policies on the registration of NGOs, commercial associations, and cooperatives
- Basic democratic rights such as representation and redress

NONDISCRIMINATORY TAX AND REGULATORY ENVIRONMENT

- Reform of subsidies, taxes, licensing requirements, and quotas favoring large enterprises over small enterprises

COMMITMENT OF GOVERNMENT LINE AGENCIES

- Government line agencies reoriented toward service role rather than traditional top-down role
- Interagency coordination

TECHNICAL, RESEARCH, AND MARKETING SUPPORT

- Extension services for resource management and monitoring
- Business planning and enterprise development
- Market research and product development

AVAILABILITY OF FINANCIAL SERVICES AND PUBLIC FUNDING

- Public funds available for ecosystem restoration
- Private and/or public financing available for enterprise development

COMMUNICATION OF SUCCESSES

- Stakeholder engagement via site visits and testimonials
- Momentum among policymakers, funders, line agencies, and local government via media stories, research reports, and site visits

BOX: WHAT IS SCALING UP?

In general, scaling up refers to increasing the scope or reach of an activity, program, project or initiative so that it serves more people or delivers more or better benefits.

WHILE THIS SEEMS STRAIGHTFORWARD ENOUGH, the term “scaling up” can be confusing because we use it in several ways. Its meaning depends on *what is being scaled* and the *type of scaling up* that is occurring.

What Are We Scaling Up?

In the broadest sense, we want to scale up:

- *Poverty reduction*, using the assets from ecosystems as a basis for wealth creation, and
- *Resilience of local communities*—especially poor families—to accommodate environmental and social change, particularly arising from climate change.

However, these are ultimate goals. In *World Resources 2008*, we use the term scaling up more specifically to refer to the means to achieve these ultimate goals. Thus we want to scale up:

- *Environmental income*—income from ecosystems and nature-related activities,
- *Access*—the power to use ecosystem resources to support livelihoods and empowerment,
- *Environmental enterprises*—generators of environmental income and livelihood skills, and
- *Community-based natural resource management (CBNRM)*—the basis of much enterprise, social learning, and empowerment.

These four elements are interrelated, as described here:

To reduce income poverty, we focus on increasing the quantity of income from nature—in other words, scaling up environmental income. This can result from higher productivity from the natural resource base due to better management, from generating new services like trophy hunting or carbon storage, or from extracting greater value from traditional products like coffee, handicrafts, or medicinal plants due to better business practices or marketing. Environmental income can take the form of subsistence services—food, building materials, or fuel, for instance—but more and more must also translate into the cash economy if the rural poor are eventually to be integrated into mainstream national and global economies.

Environmental income cannot be scaled up unless the poor have access to ecosystem resources—or the power to use these resources for benefit within the current economic and political system. With real access comes empowerment and social benefits beyond just income.

Environmental income is realized through some form of enterprise, be it farming, fishing, collection of non-timber forest products, or provision of services like tourism. Scaling up environmental income means increasing the scale, viability, and profitability of these enterprises—and doing so sustainably.

For the rural poor, many of these enterprises are best undertaken collectively as community-based schemes, since many of the resources they use are common pool resources. Scaling up CBNRM, then, is often the route to scaling up environmental income and environmental enterprise.

Most current development literature uses “scaling up” in this last sense of scaling up a successful CBNRM project, approach, or initiative. While this is certainly desirable, in this volume we do not restrict our definition of scaling up to donor-funded projects or initiatives. We go further to speak of scaling up successful and equitable ecosystem enterprises. Such enterprises are the expression of conducive governance conditions, market and business skills, and good natural resource management, which we believe are the basis of sustainability and resilience.

Five Types of Scaling Up

We can speak in terms of five different modes of scaling up, all of which can help increase the development impact of an enterprise, project, initiative, or organization.

- **Quantitative scaling up.** When an enterprise, program, or organization expands its size, profitability, geographic base, or budget, it is experiencing quantitative scaling. This is the kind of growth and expansion of membership base, constituency, or geographic influence that most people think of when they speak of scaling up. It often involves replicating a successful community-based model or enterprise in new communities or simply spreading the original enterprise or program to cover a larger area—a process sometimes referred to as “scaling out.” But quantitative scaling can also simply involve growing an enterprise’s size and profitability, and thus increasing its social and financial sustainability (Hooper et al. 2004:132; Ulvin and Miller 1994:8-11; Gillespie 2004:8).

■ **Functional scaling up.** As enterprises or organizations increase the types of activities they carry out or the scope or integration of these activities with other enterprises or organizations, they are undergoing functional scaling. This allows successful enterprises or CBNRM programs to diversify into complementary activities. For example, a community watershed rehabilitation program may expand to include agricultural marketing activities as the restored watershed becomes more agriculturally productive. Or programs may expand into new areas such as nutrition, health, or even literacy that make use of the trust and community mobilization engendered by the original activities (Hooper et al. 2004:131-132; Ulvin and Miller 1994:11-12).

■ **Organizational scaling up.** Organizations responsible for community-based projects and enterprises often strengthen their own capacities substantially, allowing them to take on new responsibilities or to carry on their current activities more effectively. They may accomplish this through staff training and personnel development to improve the management and systems of the organization. New sources of funding can also lead to organizational scaling by increasing financial independence and nurturing creativity and critical analysis. Establishing learning links with other public agencies or private organizations is also an important factor in encouraging this type of organization growth (Hooper et al. 2004:132; Ulvin and Miller 1994:16-18).

■ **Political scaling up.** This type of scaling involves increasing the political power of an organization or enterprise so that it can influence state actors, negotiate for stronger support or greater latitude in its activities, and advocate for policy changes that facilitate the organization's work or extend the enterprise's commercial or social reach. Through political scaling up, community-based organizations can greatly increase the chances that their work will spread to new jurisdictions or expand into new activities, increasing their impact (Hooper et al. 2004:132; Ulvin and Miller 1994:12-13).

■ **Institutional scaling up.** This refers to growing and strengthening the public institutions necessary for establishing and distributing the benefits of ecosystem enterprises. Local government is often the focus of this scaling. Replication of the institutional infrastructure of representation—the institutionalized form of participation—and the placement of natural resource functions at the local representative level of government can help spread citizen inclusion in decision-making. Since local government is both replicable across space and sustainable over time, it can be an important partner in scaling up ecosystem enterprises (Ribot 2008).



BUILDING OWNERSHIP, CAPACITY, AND CONNECTION

CHAPTER 2

Ownership: A Local Stake in Development and Enterprise



MANAGING ECOSYSTEMS PRODUCTIVELY and sustainably generally requires a significant investment of time and resources. What can catalyze the willingness to make this personal investment, or, even more challenging, the willingness to work and invest collaboratively with others in the community? Ownership is the inducement—having a stake in the benefits that will accrue from ecosystem management. Ownership

SUMMING UP: OWNERSHIP

Ownership has two aspects in relation to ecosystem enterprises: secure resource rights and meaningful participation rights, or the ability to participate in decisions about the management of local ecosystems. Together they create a real stake—financial and social—in how ecosystems are managed.

FOUR STEPS TO FOSTER OWNERSHIP

STEP 1: Improve the Security of Resource Tenure

- Security of resource tenure supports successful nature-based enterprise. Research confirms that secure tenure is linked to the success of community-based natural resource management. Unfortunately, tenure insecurity is widespread, constituting a major obstacle to ecosystem enterprises among the poor.
- To improve the security of tenure for the majority of poor rural residents, a broader approach is necessary that builds on local tenure practices and uses local institutions to execute simpler, speedier, and lower-cost forms of land and resource registration that are more accessible to rural families. Recognition of local customary land rights must be part of any viable tenure reform. Such reform must also include development of more effective dispute resolution systems that can accommodate both customary and statutory titles within a single legal framework.

STEP 2: Catalyze Demand for Ecosystem Management

- Ecosystem-based enterprises that arise out of community demand are more likely to succeed. Demand is expressed as the willingness for collective action—for joint management of local ecosystem resources. Demand can be catalyzed by factors such as a change in the local environment or economy, a change in the financial incentives for investment, a change in resource rights or access, or a change in information through exposure to pilot projects or demonstrations. Leadership is important in channeling community demand into enterprise.

STEP 3: Inspire a Public Commitment to Collective Action

- To be useful, demand must translate into a public commitment of money, resources, or time—a demonstration of involvement on the part of stakeholders that signals their ownership of the joint effort or enterprise and their commitment to collective action.

STEP 4: Encourage Participatory Decision-Making

- Participatory decision-making allows local stakeholders to own the process of creating and carrying out ecosystem enterprises and is important to building demand for CBNRM and other enterprises.
- Participation by the range of stakeholders builds the legitimacy of business or resource management decisions, which can bring better compliance with management plans. Participation also empowers the poor and builds the social capacities of the group, which can improve co-operation and lessen conflict.
- Making participation more poor-friendly is essential if the poor are to benefit from CBNRM and nature-based enterprise. Some strategies include:
 - *Establishing formal rules for inclusion* of marginalized groups, such as on executive committees;
 - *Undertaking group mapping or modeling exercises* to establish a common ground of endeavor and information sharing;
 - *Establishing affinity groups* to allow the poor to organize and represent their needs effectively;
 - *Engaging in a group visioning process* to establish a model for what successful collective action will look like, understand what its benefits and challenges will be, and establish a basis for negotiation among competing interests; and
 - *Accounting for the costs of resource management* and compensating the poor when these costs fall on them disproportionately.

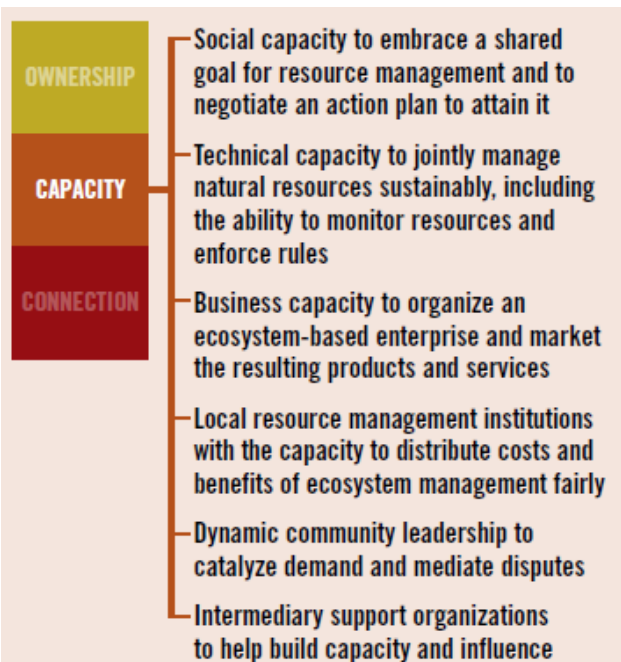
here involves both *resource rights*—the rights over land and resources known as tenure—as well as *a sense of control* over the larger process of resource development in a community. Local ownership of resource rights and decision-making processes governing resource use provides the motive force for community

driven development of ecosystem enterprises. Without this local stake in ownership, ecosystem management schemes are not likely to be sustainable or effective at poverty reduction.



Capacity: Social, Technical, and Business Skills to Manage Resources and Establish Enterprises

When the “demand cycle” finishes, the “action cycle” begins. Once a community or group of resource users has acquired resource rights and generated the vision and commitment—the demand—for joint enterprise, it enters a new phase of execution. Translating the group’s demand into action requires skills. At a minimum, the group must learn to manage the resource, produce and market its product, and organize its own decision-making process to keep members aligned and involved in the enterprise. Building these skills is at the heart of the process of scaling up rural ecosystem enterprises.



SUMMING UP: CAPACITY

Effective approaches to capacity development go beyond one-off technical courses or “how-to” training to allow local people to express their creativity and entrepreneurial ability and to provide opportunities to develop adaptive skills.

Local Organizations

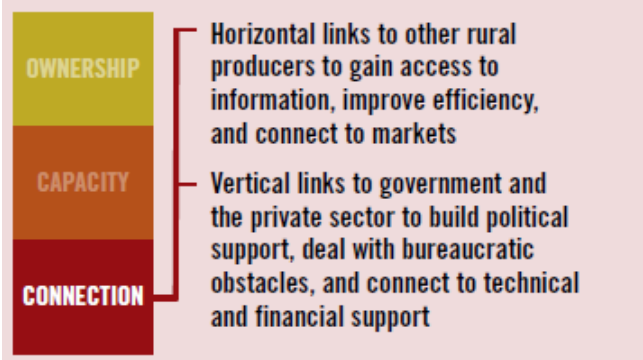
- Local organizations are essential for implementing and sustaining CBNRM and creating ecosystem-based enterprises. Local organizations include a broad range of bodies including resource management units like forest user groups or watershed committees, as well as local government bodies such as village councils. Community-based organizations like NGOs, unions, cooperatives, church groups, and self-help groups are also local organizations offering important services to local enterprises. As such, they are uniquely equipped to respond to community demand.
- Because they are populated by people who know each other, local organizations such as resource user groups offer opportunities for collective action and mutual assistance not always present in more geographically dispersed organizations. NGOs and other community-based organizations can provide key services to organize CBNRM and can strengthen user groups through training in business and management skills.
- Despite their advantages, local organizations often suffer significant weaknesses, including a restricted focus that can foster parochialism and insularity; lack of resources and connections that limits their ability to grow and connect to markets; a lack of accountability to members of the group, particularly if the group is dominated by a powerful leader or local elites; and a lack of inclusiveness of the poor, women, or other socially marginalized groups.
- The challenge is to work with local organizations to capitalize on their strengths and facilitate a transformation from within that allows them to become more inclusive and competent. Intermediary support organizations can be important contributors to this transformation.

Intermediary Support Organizations

- In the last 15 years, ISOs have begun to emerge as key actors in the process of scaling-up nature-based enterprises. ISOs are distinguished by high-level organizing, technical, or political skills that they use to help local groups increase their capacity and functioning, and to connect to state or regional authorities and funding sources. They are usually NGOs or other civil society groups such as labor unions, but they can also be private-sector businesses.

- Effective ISOs are defined by several key qualities: credibility in village circles due to their past successes, influence with government authorities, good communication skills, and an understanding of the power of publicizing.
- The work ISOs do generally falls into four main categories: social and technical capacity development; facilitating finance for CBNRM and new enterprises; increasing equity and transparency of local organizations; and building linkages and networks for information sharing, political influence, and market connection.
- ISOs typically adopt a long-term and collaborative approach to capacity-building, often using their mentoring ability to nurture local NGOs and other service providers (“training the trainers”) who may be more appropriate to provide direct skills training within a given local context.
- ISOs pay special attention to the need to develop a group’s social capacity. To develop that, ISOs emphasize process, often using guided group interactions, participatory and trust-building exercises, and group visioning processes. In these exchanges, ISOs act as facilitators and honest brokers.
- ISOs are often in a position to engage in “upward” capacity-building with government agencies—that is, improving the receptivity of government to community-initiated enterprises, improving its ability to deliver training and support services, and securing its policy support to ease regulatory burdens that often handicap rural enterprises.
- A core strength of ISOs is their ability to build ties between the diverse actors in development. This “bridging” or networking function lies at the heart of efforts to sustain and scale up successes in CBNRM and nature-based enterprise.
- ISOs are well positioned to communicate the importance of transparency and equity in local enterprises and to lobby communities to put in place auditing, benefits sharing, and participation practices that will maintain the confidence and support of community members.
- One of the most persistent barriers that rural nature-based enterprises face is the lack of support services that can enable inexperienced communities to grow their business skills and expand their social and institutional capabilities. ISOs, while important, are just one element in a larger web of support that must also include governments, private businesses, civil society groups, donors, international NGOs, and other international organizations and that must persist over the long term.

Connection: Links to Learning, Support, and Commercial Networks and Associations



If they are to prosper—or even survive—rural enterprises must be connected to learning, support, and commercial networks. Such networks help compensate for the isolation and lack of market power that rural businesses typically suffer, and they help link the diverse array of local organizations to achieve common goals. As mentioned in the last section, linkages and networks are principal tools in sustaining and scaling up nature-based businesses. Networks link rural producers in information exchanges, in cooperative production and marketing efforts, in product and process research, in financing schemes, and in efforts to achieve political influence.

SUMMING UP: CONNECTION

- Networks represent dynamic connections between individuals, groups, and enterprises—a form of structured social capital. They can be informal, like learning networks or support groups, or more formalized, with rules and written charters, such as cooperatives, unions, trade groups, or federations. These more formalized networks we call associations.
- Networks and associations are the physical and institutional face of scaling up, giving an organizational form to the growth in information, influence, and market access that allows nature-based enterprises to expand their production, profits, and social benefits.

Networks and the Poor

- Networks create institutional spaces in which the poor can interact with other producers working towards similar goals, building social capital through contact and cooperation.
- They also help to legitimize and strengthen the informal institutions of the poor, such as savings groups or women's groups, by expanding their contacts, helping them to enter the mainstream of recognized organizations.

Association Benefits

- Producer associations enable small rural producers to overcome some of their inherent handicaps, achieving economies of scale in harvesting, processing, and marketing nature-based products and services.
- Cooperatives and marketing associations allow small producers to gain bargaining power with traders in the middle or to bypass them altogether, letting the producers rise higher on the value chain and capture a greater share of the market value of their products.
- Associations provide channels for various forms of microcredit and private finance, acting as a formal node that private banks and public funding agencies can work through to reach a dispersed rural clientele.

- Learning networks are powerful communication links that provide a conduit for sharing information and fostering group learning, reducing innovation time—the time it takes to learn about and adapt new ideas to the local situation. For this reason, they greatly contribute to adaptive management of ecosystem resources, which depends on sharing experiences and lessons learned through a strategic process of trial and error. Cooperatives and producer associations often act as venues for learning new business and technical skills through courses or site visits.
- Federations allow enterprise owners to organize and advocate for their interests within the political process. They provide forums for reaching consensus and crafting a uniform message, amplifying their influence on policy.

Association Challenges

- As with many rural organizations, associations can be exclusive, and they often discriminate against smaller or poorer producers. It is not uncommon for them to be dominated by more wealthy, educated, or politically connected producers.
- Rural associations frequently face funding problems and often depend on grants to cover start-up and running costs. They tend to be financially marginal, with limited budgets, and thus have trouble expanding their activities or offering many services that would benefit their members.
- Government support for rural associations can be crucial for their survival, but can also interfere with their internal governance. Governments often try to use cooperatives and other associations for political ends, which can destroy their effectiveness as producer-driven organizations.

ROUTES TO RESILIENCE

CHAPTER 3 CASE STUDIES

IN THIS REPORT WE ARGUE THAT COMMUNITY-BASED NATURAL resources management that springs from genuine community demand can nurture enterprises that both generate considerable income and improve the state of local ecosystems. Under the right conditions, these enterprises can scale up, achieving a significant poverty reduction effect. The case studies in this chapter chronicle three instances where significant scale and income effects have been achieved. The cases detail the governance conditions, principal actors, and enabling conditions that allowed these successes to go forward, as well as the challenges they have faced and must continue to deal with in order to sustain their success.

The cases also demonstrate that enterprises founded on a basis of good environmental governance can not only improve the livelihoods of the rural poor but increase their resilience to continuing challenges. They can become more economically resilient—better able to face economic risks. They and their communities can become more socially resilient—better to work together for mutual benefit. And the ecosystems they live in can become more biologically resilient—more productive and stable.

The three case studies in this chapter are as diverse in their geography as they are in the ways the communities involved have worked to improve their lives through the management of local natural resources. They illustrate the power of self-interest and community ownership, the enabling value of intermediary organizations, and how communication and networks can provide new ideas and support.

These cases also illustrate how hard this all is—that nothing achieves the perfection of plans on paper, that progress takes time and support, but that lives can improve and communities can get stronger.



Wetlands in Bangladesh

Eight years ago, a full fishing net was a rare sight on the eastern shores of Hail Haor wetland in remote northern Bangladesh. Even the wildfowl for which the area was renowned had been driven away by shrinking habitat and hunters. For the very poor villagers who made up the majority of local residents, and whose food and income depended on fish and aquatic plants, life was increasingly desperate. Households competed fiercely to buy fishing rights from the local elite. These few people, mostly large landowners and businessmen, controlled access to local water bodies (known as *beels*) that contained water year round, purchasing government leases which they then offered to the highest bidder.

Today the residents of Hail Haor area enjoy food and income security. Conflict over fishing rights has been replaced by cooperation, with villagers patrolling a no-fishing sanctuary and voluntarily paying dues to harvest a newly excavated beel. Degraded bird and fish habitat has been restored by local labor. Fish catches have almost doubled, and two locally extinct species have been successfully reintroduced.

This turnaround in fortunes has been achieved under an innovative pilot program in people-led wetland management that is drawing attention from policy-makers across South Asia. Based on the “co-management” of wetlands by new community institutions and local government, the Management of Aquatic Ecosystems through Community Husbandry (MACH) program, funded by the United States Agency for International Development (USAID), has revived fisheries in three degraded wetlands, improving the circumstances of 184,000 of Bangladesh’s poorest citizens.

Success is rooted in community self-interest and ownership. In return for adopting conservation measures and sustainable fishing practices, community organizations (each representing several adjacent vil-

BENEFITTING PEOPLE AND NATURE: KEY MACH ACHIEVEMENTS 1999-2006

Building Environmental Capital

- Sixty-three sanctuaries established, covering 178 ha; 57 ha of beel wetland and 31 km of water channels excavated.
- Fishing restrictions have aided habitat and fish stock recovery.
- Fishing pressure in 110 project villages fell by 2,500 person hours per day.
- Some 644,000 trees planted to replace lost swamp forests and reduce erosion.
- Wetlands restocked with 1.2 million fish from 15 native species, including 8 threatened fish species (MACH 2007:11-13; 15; Sultana 2006b:2).

Building Economic Capital

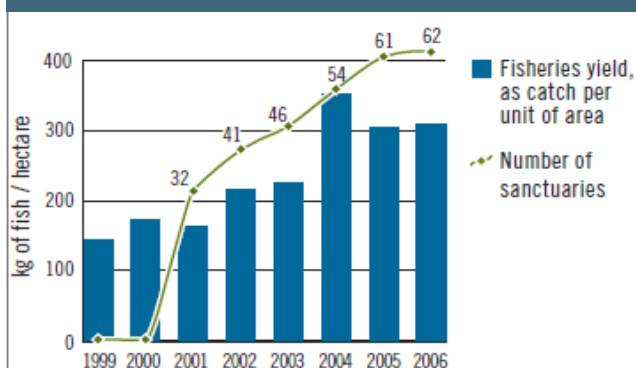
- Members of 5,202 wetland-dependent households received training and credit to start new livelihoods (MACH 2007:32-33).
- Project works provided 2 million days of local employment (MACH 2007:13).
- Average daily household incomes rose by a third, to US\$1.31 (MACH 2007:33).
- Fish production rose 140 percent and consumption increased by 52 percent (Whitford et al. 2006:7).

Building Social Capital

- New community institutions provided a forum for cooperation among different interest groups, including poor fishing families, better-off landowners, and local businessmen (MACH 2007:57).
- Co-managed arrangements with local government provided support and sustainability for the new community institutions.
- Endowment and revolving credit funds enabled these new institutions to function independently after project finance ended (MACH 2007:45; MACH 2006:4.13-4.17).

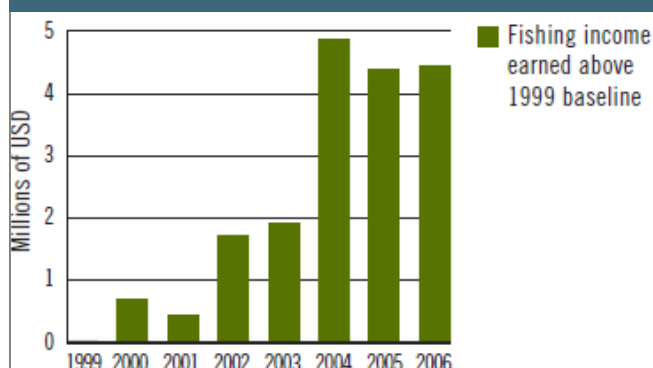
lages) receive 10-year leases to manage local waterways as well as grants to excavate silted beels and create wet-

**FISH YIELD AND FISH SANCTUARIES,
MACH SITES, 1999-2006**

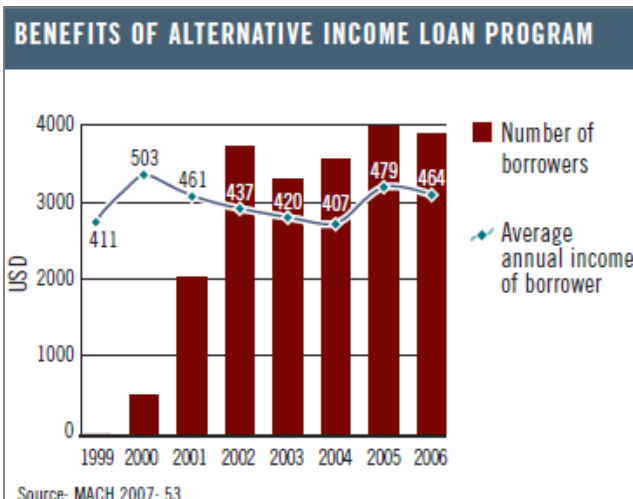


Source: MACH 2007:11, 53

**ADDITIONAL INCOME FROM FISHING
IN MACH COMMUNITIES**



Source: MACH 2007: 53



land sanctuaries. To offset the hardships caused by fishing restrictions, poor households also receive skills training and micro-loans to start new enterprises. Between 1999 and 2006, fish catches in project villages rose by 140 percent, consumption went up by 52 percent, and average daily household incomes increased by 33 percent.

While the long-term sustainability of these benefits cannot be judged yet, community-led wetlands management and livelihood diversification have improved the ability of some of Bangladesh's poorest inhabitants to survive economic downturns, environmental disruption, and the potential impact of climate change on the country's low-lying floodplains. By protecting wetlands from further overexploitation and degradation, communities have also improved the environmental resilience of the resources on which their lives and livelihoods depend.

So clear-cut have been the ecosystem and anti-poverty benefits that the government of Bangladesh has replicated key elements of MACH's approach in other fishing areas and in a pilot program for community-led management of protected forest areas. It has also adopted MACH's co-management model in its new Inland Capture Fisheries Strategy, reversing a decades-old policy of centralized control over the floodplains that cover half the country and on which 70 million people depend for food and income.

Forestry in Guatemala

Guatemala's northernmost region, El Petén, hosts a unique blend of natural beauty, biological diversity, and archeological heritage dating back to ancient Mayan civilization. The Petén's 33,000 km² of relatively undisturbed lowland tropical forests shelter 95 species of mammals, among them spider monkeys, pumas, and threatened jaguars, and 400 species of birds, including the iconic scarlet macaw. The region is also home to an expanding melting pot of Guatemalan citizens: indige-

nous descendants of the Mayans, political refugees who sought refuge during 20 years of civil war, and economic migrants from the country's overpopulated cities and degraded highlands.

A decade ago, deforestation had diminished biodiversity and threatened forest-based livelihoods in the region. But the northern Petén is now the setting for successful community-run forestry enterprises whose sustainably harvested wood and non-timber forest products (NTFPs) are attracting the attention of overseas buyers.

Under the supervision of non-governmental organizations (NGOs), donors, and government agencies, community-owned forestry enterprises steward more than 420,000 hectares in the multiple use zone of the renowned Maya Biosphere Reserve (MBR). These enterprises are each in charge of one distinct parcel of land—a concession—that the Guatemalan government has leased to them. Forest product sales from these enterprises have brought new employment, infrastructure, social cohesion, and income.

Between October 2006 and September 2007, the concessions produced some US\$4.75 million in certified timber sales and close to US\$150,000 in sales of *xate* (palm leaves used for flower arrangements) and other non-timber forest products. Under village management, biodiversity has flourished and forest fires, illegal logging, and hunting have declined dramatically, while continuing unabated in neighboring national parks.

By 2000, the forest concessions in the reserve managed by these community enterprises had become the world's largest tract of sustainably certified and community-managed forest. Prior to 2004, 10 enterprises had met the international certification standard of the Forest Stewardship Council (FSC) for sustainably harvested wood, and several were selling high-income finished products such as decking and floor panels in addition to timber.

The transformation of fragmented communities of farmers and illegal loggers into eco-entrepreneurs did not occur in a policy vacuum. Government decentralization policies, which awarded communities tenure rights and resource management responsibilities, provided an enabling environment and motivation for communities to protect their forests. Substantial assistance from donors and intermediary support organizations provided the funds and the technical expertise to make the concession model work.

Progress toward financial and organizational independence has been slow and sometimes challenging, and the community enterprises are not all assured of a long-term future. The more successful ones now show signs of increased resilience. The overall results have proved promising enough for policymakers to consider scaling up the effort across the region. Already, com-

COMMUNITY FORESTRY ENTERPRISES: KEY ACHIEVEMENTS

Building Environmental Capital

- Community harvesting rights were conditional on sustainable forestry practices; only 0.8–2.4 trees felled per ha (Nittler and Tschinkel 2005:17).
- As of 2008, 9 community concessions, 2 industrial concessions, and 1 cooperative—managing about 480,000 ha in total—maintained certification by the Forest Stewardship Council (Hughell and Butterfield 2008:6).
- Annual forest clearance rates within certified concessions fell sharply to only 0.04 percent of tree cover, one twentieth of the clearance rate in neighboring protected areas; squatting by settlers and illegal logging also declined (Hughell and Butterfield 2008:9).
- Diversity of birds, animals, and insects has been maintained or enhanced (Balas 2004 and Radachowsky 2004 as cited in Nittler and Tschinkel 2005:17).

Building Economic Capital

- More than 10,000 people directly benefit from forest concessions and 60,000 receive indirect benefits. Concession employees receive more than double the regional minimum wage (Saito 2008).
- Trade in timber reached US\$4.7 million in 2007, with 2.6 million board feet sold. Sales of non-timber forest products further boosted income from concessions (Rainforest Alliance 2007a:1).
- By 2006, a total of 6,839 members of community enterprises had received intensive training in forestry and business management and in technical skills (Chemonics 2006:8).
- Environmental services payments to communities for avoided deforestation and carbon sequestration are under negotiation (Rainforest Alliance 2007b:3).

Building Social Capital

- Communities received legal rights to manage and harvest forests and security of tenure via 25-year management leases (Nittler and Tschinkel 2005:3).
- New local NGOs were established to assist communities, strengthening civil society (Nittler and Tschinkel 2005:11–12).
- EFCs established an umbrella association and a forest products company, FORESCOM, thereby extending their influence and sales reach (Nittler and Tschinkel 2005:10).
- A share of the revenue from forest products was used for community projects such as installing water supply systems and paying school fees (Rainforest Alliance 2007b:3).

munities in Honduras are replicating the concession model, while government agencies from Nicaragua, Panama, and Peru have hired members of Petén's community-owned enterprises as consultants in sustainable forest management.

PERCENTAGE OF AREA BURNED IN EACH LAND USE ZONE BY YEAR

Land Use Zone	1998	2003	2005	2007
Core protected areas	23.6%	26.0%	29.6%	10.4%
FSC/RA certified concessions in multiple use zone	6.3%	1.8%	0.1%	0.1%
Remainder of multiple use zone	21.9%	21.3%	12.9%	5.0%
Buffer zone	23.9%	23.5%	19.6%	10.3%
Overall MBR (%)	19.5%	19.1%	18.0%	7.2%
Overall MBR (ha)	404,632	398,280	375,149	149,424

Source: Hughell and Butterfield 2008:1–2

Farming the Desert in Niger

Niger is an unlikely setting for an environmental success story of major proportions. The West African state ranks 174th out of 177 countries in the 2007–08 Human Development Index prepared by the United Nations Development Programme, based on indicators of health, education, and economic well-being. Sixty percent of Niger's people live on less than US\$1 per day. Four fifths of its territory falls within the Sahara desert and cannot support food crops. Yet population pressures are intense, with rural women bearing an average of 7.1 children. Niger's farmland and people—nomadic tribes apart—are concentrated in a southern strip of wind-swept savanna that falls within the Sahelian climatic zone. Rural communities struggle to grow crops in sandy, nutrient poor soils against a backdrop of chronically low and erratic rainfall, an ecological challenge that climate change will only intensify.

Yet Niger is also the scene of an unprecedented, farmer-led “re-greening” movement that has reversed desertification and brought increased crop production, income, food security, and self-reliance to impoverished rural producers. Vast expanses of savanna devoid of vegetation in the early 1980s are now densely studded by trees, shrubs, and crops. The scale of the change is truly astonishing, affecting about 5 million hectares of land—about the size of Costa Rica—which amounts to almost half of the cultivated land in Niger. By 2007, between a quarter and half of all the country's farmers were involved, and estimates suggest that at least 4.5 million people were reaping the benefits.

The ecological impacts have been dramatic and include reduced erosion and increased soil fertility. Crop harvests have risen in many areas, enabling rural households to enjoy better diets, improved nutrition, higher incomes, and increased capacity to cope with periods of drought. In some villages, the *soudure*—the annual “hungry period” when food supplies are nearly exhausted—has been shortened or even eliminated. Large areas of countryside that a few years ago faced constant shortages of fuelwood and fodder now produce surpluses for sale in nearby markets. Many rural pro-

ducers have doubled or tripled their incomes through the sale of wood, seed pods, and edible leaves.

The re-greening movement has had especially important impacts for some of the poorest members of Nigerien society—women and young men. The burden on women associated with the gathering of wood for household fuel has been reduced substantially. So has the annual exodus of young men seeking urban jobs in Niger and neighboring countries, thanks to new opportunities to earn income in an expanded and diversified rural economy. With farmers producing more fuelwood to supply urban areas, Niger's shrinking natural forests have also been spared further destruction.

There have been two key vehicles for this remarkable transformation. First is the adoption of simple, low-cost techniques for managing the natural regeneration of trees and shrubs, known as farmer-managed natural regeneration, or FMNR. In concert with forest management, many communities are also using simple soil and water conservation programs to drive the green transformation. Both efforts have been encouraged and assisted by intermediaries including NGOs, donor governments, and international aid agencies. While this case study emphasizes the FMNR process, much of Niger's greening success can also be attributed to the simultaneous soil and conservation work. FMNR evolved in the mid-1980s as a response to the problems associated with traditional farming in Niger, in which farmers "cleaned" their land of all vegetation and crop residues before planting crops. The past two decades of experimentation and innovation with FMNR in sustainably harvesting native vegetation have resulted in widespread acceptance that tree cover brings both income and subsistence benefits. The government of Niger has played an enabling role, enacting key land tenure and tree growth reforms, having learned from the failures of earlier destructive policies.

In an ecologically vulnerable region expected to experience more frequent drought as a result of climate change, Niger's tree regeneration movement, say natural resource management experts, offers a proven path to greater environmental and economic resilience and increased food security for the inhabitants of Africa's drylands. Given the explosive rate of population growth in the region, FMNR alone will not enable Niger—or other Sahelian countries—to stay ahead of the food and livelihood needs of their people. Indeed, even though FMNR is used widely today, 50 percent of Niger's children remain undernourished. But it is one important tool to increase productivity for land-poor farmers and has already proved its capacity to provide them with diverse and sustainable rural livelihoods and economies.

KEY ACHIEVEMENTS OF NIGER'S RE-GREENING MOVEMENT

Building Environmental Capital

- An increase of 10-to 20-fold in tree and shrub cover on about 5 million ha of land, with approximately 200 million trees protected and managed (McGahuey and Winterbottom 2007:7; Tappan 2007; Raik 2008).
- At least 250,000 ha of degraded land reclaimed for crop production (McGahuey and Winterbottom 2007:7).
- Soil fertility improved as higher tree densities act as windbreaks to counter erosion, provide enriching mulch, and fix nitrogen in root systems (Reij 2006:iii).
- In some areas, the return of wild fauna, including hares, wild guinea fowls, squirrels, and jackals (Boubacar et al. 2005:16).
- Return of diverse local tree species that had all but disappeared from many areas and of beneficial insect and bird predators that reduce crop pests (Boubacar et al. 2005:13. Rinaudo 2005a:14).

Building Economic Capital

- Expanded cultivation of cereals and vegetables, with harvests doubling in some areas (Tougiani et al. 2008:16; Boubacar et al. 2005:25).
- Pods and leaves provide critical dry-season fodder supplies for livestock (Tougiani et al. 2008:16).
- New food export markets created, primarily to Nigeria (Reij 2006:ii).
- Rural incomes rose in three regions practicing farmer-managed natural regeneration (FMNR) (McGahuey and Winterbottom 2007:3).
- Creation of specialized local markets in buying, rehabilitating, and reselling degraded lands, with land values rising by 75 -140 percent in some areas (Abdoulaye and Ibro 2006:44).
- Empowerment of hundreds of thousands of poor farmers, enabling them to pursue new enterprises and improve livelihoods (McGahuey 2008).

Building Social Capital

- Some 20-25 percent of all rural producers have adopted improved natural resource management techniques (estimate based on Tappan 2007).
- Food, fuelwood, and income provided by trees have increased food security (Reij 2006:iii).
- Nutrition and diets have improved through the availability of edible tree leaves and fruits as well as produce grown on rehabilitated plots (Larwanou et al. 2006:22).
- Improved access to land and income generation for women, widows, and the landless poor (McGahuey and Winterbottom 2007:13).
- Average time spent by women collecting firewood has fallen from 2.5 hours to half an hour (Reij 2006:iii).
- Increased self-reliance among villages; improved social status of women involved in FMNR (Reij 2006:iii; Diarra 2006:27).
- Reduced urban exodus of young men in search of work and creation of new small businesses related to forest products (BBC 2006).

DRIVING THE SCALING PROCESS

CHAPTER 4

SUCCESSFULLY SCALING UP ECOSYSTEM

enterprises requires a confluence of community-level and national-level actions. Chapter 2 points out that community stakeholders in ecosystem enterprises must find a compelling rationale for working together and an effective process for learning and applying new skills as a group. For scaling up to occur, this rationale and process must be effectively communicated to other groups in similar circumstances and supported by intermediary organizations. At the same time, national governments, donors, and the private sector must provide an environment that nurtures small rural enterprises and removes some of the political, financial, and physical barriers they face as they struggle to break out of the confines of rural

markets.

This chapter looks at both these levels of action—community and national. It first examines the case studies from Chapter 3 to extract cross-cutting lessons on how successful enterprises are founded, sustained, and expanded. It then looks beyond the community level to probe challenges and enabling conditions at the macro level—larger governance, financing, and infrastructure considerations that if left unaddressed will stymie the scaling up process.

SUMMING UP: DRIVING THE SCALING PROCESS

SEVEN INSIGHTS FROM THE CASES

- *Resource Tenure Need Not Be Perfect to be Useful.* The prospect of gaining new or more secure resource rights is more important to the scaling up of nature-based enterprises than the form this tenure takes, although the precise form does have important implications for the enterprise's sustainability.
- *High-Profile Demonstrations and Communication Help Scale up Demand.* Scaling up will not occur without good communication of success stories.
- *Capacity Follows Power.* Devolution of resource rights induces capacity development, offering incentives and opportunity to gain entrepreneurial skills.
- *Local Resource Management Institutions Require Time to Mature.* The development of a capable local resource management institution requires patience as the institution gains legitimacy and becomes more representative and responsive.
- *ISOs Provide Focus and Credibility.* Intermediary support organizations focus community demand and help create functional institutions with the necessary technical and social capacities.
- *Accountability Remains Important.* Accountability of the local resource management institution helps maintain the will for collective action and enterprise.
- *High-Level Government and Donor commitment is Necessary.* Sustained scaling up cannot occur without clear government and donor commitment over an extended period of enterprise development.

ELEMENTS OF AN ENABLING ENVIRONMENT

1. Fair and Expanded Markets for Rural Enterprise

- *Confront Elite Capture, Encourage Competition.* The more valuable the resource, the more prone it is to being used for political patronage, resulting in distortions in how resource concessions, subsidies, or access are granted. Regulatory instruments such as production quotas or permits are also frequently captured by those with influence. Many developing nations still lack basic competition laws and have yet to act aggressively to police the market place or confront resource-related corruption.
- *Adjust Regulatory and Tax Regimes.* Governments have a tendency toward heavy-handed regulation of community groups that manage natural resources, often manifesting as strict prescriptions for “best practices” that communities are required to follow or complex management plans that they must formulate before being granted the necessary permits to harvest or carry out management activities. In many cases these prescriptions are unnecessarily complex, do not respect local institutions or capacities, and impose a severe financial burden. An alternative would be to adopt a “minimum standards” approach, in which the national government would establish a set of rules or standards that community members must follow in management but would grant communities flexibility in how they meet this standard. In addition, reconfiguring the tax burden away from taxes levied at the point of resource extraction could benefit nature-based enterprise formation.
- *Provide Technical, Research, and Market Assistance.* Governments have a legitimate role to play in helping to set product quality standards and undertaking product

research, as well as introducing new technologies, improved seed and plant varieties, and more effective resource management methods that rural producers would have trouble developing on their own.

2. Improved National Governance Related to Rural Enterprise

- *Revitalize Rural Representation in National Legislatures.* Rural communities face a lack of representation of their interests, resulting in onerous regulations that handicap their ability to manage local resources. Rural legislators frequently lack autonomy from political bosses and the executive branch and are not easily held to account by voters for their actions. As a result, they often do not use their lawmaking and oversight powers to protect rural communities from environmental exploitation or to argue their rural constituents' case for greater resources rights or more appropriate regulations.
- *Reorient Line Agencies toward Participation and Service.* Line agencies are typically dominated by professional managers oriented towards resource production rather than community consultation or the development of small enterprises. Changing this situation will require redefining their mission to stress facilitation of community enterprise through capacity development and participatory decision-making.

3. Improved Physical Infrastructure

- *Adopt a More Community-Driven Approach to Infrastructure.* Inadequate roads, communication lines, and energy infrastructure are persistent and profound obstacles to rural enterprise. To meet the challenges of upgrading rural infrastructure, a new paradigm has emerged that accepts the need to approach such infrastructure with social and environmental sustainability in mind. This requires being more sensitive to local demand and more community-focused, drawing on a process of consultation with and participation of affected communities. Small-scale, com-

munity-based infrastructure projects have shown they can confer a variety of benefits particularly targeted to rural enterprises and the poor.

4. Adequate Financing

- *Help Microcredit Mature.* The microcredit industry has achieved impressive growth in the last two decades, attracting the interest of the commercial banking industry. Nonetheless, the availability of finance is still a main obstacle in rural enterprise development. A major role for government in spurring the continued maturation of microfinance is to provide a stable investment environment that both attracts new financial institutions into areas where loan availability is still restricted and spurs competition among loan providers in areas where microfinance is already well established. In addition, government has a critical role in providing information and training for lending institutions.
- *Encourage Microinsurance.* Conventional businesses typically combine insurance into the package of financial services they rely on to stay in business, and small rural enterprises deserve no less. However, the range of microinsurance products available today is still quite limited. Simpler and more flexible plans are required to serve a low-income rural clientele, coupled with a community-level distribution channel through local institutions like post offices or local retailers.
- *Leverage Remittances for Rural Investment.* Remittances are potentially a significant source of investment capital for rural enterprises. Some emigrants have established informal development funds in which they pool remittances and send them to their home towns to fund development projects. In turn, some governments have established matching grants to encourage this kind of community investment. Bringing down the high cost of sending remittances will be key in making them a more potent source of investment funds.



RECOMMENDATIONS: ADVANCING ENTERPRISE AND RESILIENCE

CHAPTER 5

THIS VOLUME OF THE *WORLD RESOURCES*

Report presents in strategic detail an approach to addressing rural poverty initially examined in our last report, *The Wealth of the Poor*. The ‘poverty-environment-governance’ construct introduced in that volume informs an approach that sets the stage for a community’s first steps on a path to a better economic future. We argued there that poverty and the environment are inextricably linked and that the world’s rural poor could enhance their livelihoods by capturing greater value from ecosystems. Income from sustainably managed ecosystems can act as a stepping stone in the economic empowerment of the poor. But that can only happen when poor households are able to reap the benefits of their good ecosystem stewardship. Better governance, beginning with improved and predictable resource tenure, is the catalyst.

World Resources 2008 explores the model further. It argues that properly designed nature-based enterprises can not only improve the livelihoods of the rural poor, they can also create resilience—economic, social, and environmental—that can cushion the impact of climate change, keep communities rooted, and help provide needed social stability.

World Resources 2008 examines what is necessary to allow such nature-based enterprise to scale up so as to have greater impact on rural poverty. It identifies three critical elements: community ownership and self-interest, the role of support organizations in providing

skills and capacity, and the importance of networks—formal and informal—as support and learning structures.

When these elements are present, communities enhance their ability to manage ecosystems collectively and extract a sustained stream of benefits, unlocking the wealth potential of nature. In so doing they build competencies that extend beyond nature-based enterprises, allowing them to expand their livelihood options beyond reliance on natural resources income alone.

This approach to rural economic growth and resilience takes on added importance as we look ahead. The World Bank predicts that profound poverty will remain largely rural, almost until the end of the century (Ravallion et al. 2007:39). The nature of that poverty, and how the world responds, will be shaped by the larger trends at work right now.

Climate change will, by all accounts, have the greatest impact on the rural poor. Other forces also come into play. An anticipated 50 percent increase in world population by the end of this century will add to the stress on natural resources. Increased consumption by a growing global middle class will continue the erosion of ecosystems, starkly documented by the Millennium Ecosystem Assessment in 2005 (MA 2005).



The emergence of new economic and political power centers with often divergent and competing interests and values will likely make international agreements to solve problems more difficult. Yet it is precisely the interplay between the persistence of rural poverty and the inexorable trends shaping the twenty-first century that makes addressing this problem so urgent and important.

This chapter outlines specific actions that governments at all levels can take to encourage the creation of nature-based enterprises that build rural resilience as they reduce poverty. It also looks at the important roles that can be played in this process by donors, NGOs, and other institutions working on development issues, particularly with respect to encouraging the development of intermediary support organizations.

In pursuing these actions, a primary goal is to fashion an extensive web of support that can help rural enterprises gain the capacities they require to thrive. One of the most persistent barriers they face is a lack of support services that can enable inexperienced communities to grow their business skills and their institutional capabilities at the same time. Associations and intermediary support organizations (ISOs) are elements of the web of support that rural enterprises require, but governments, donors, international NGOs, and other international organizations must also participate in delivering the capacity that nature-based businesses need over the long term. Such support services are key to turning budding rural enterprises into engines for rural employment and wealth creation—the kind of economic growth that will directly benefit poor families.



RECOMMENDATIONS: ADVANCING ENTERPRISE AND RESILIENCE

CULTIVATING OWNERSHIP AND INCREASING DEMAND

- Complete the job of decentralization.
- Pursue tenure reform that is flexible and inclusive.
- Support pilot projects and help communicate successes.
- Facilitate community participation.

DEVELOPING THE CAPACITY OF LOCAL ORGANIZATIONS

Donors can:

- Provide sustained funding.
- Support leadership training.
- Require accountability for outputs.
- Recognize achievement with awards.

Governments can:

- Avoid demanding control at the project level.
- Be responsive to the lessons that ISOs can teach.
- Facilitate communication of ISO successes and lessons.
- Culture leadership and capacity-building through secondments to line agencies.
- Create a policy environment that favors the action of civil society organizations like ISOs.
- Encourage third-party evaluations to improve accountability.

ISOs themselves can:

- Diversify their funding sources.
- Charge for services.
- Keep a hand in local project work.
- Create opportunities for clients to evaluate the organization's performance.
- Partner with a high-profile organization.

PROMOTING ENTERPRISE NETWORKS AND ASSOCIATIONS

- Create a policy environment conducive to networking.
- Provide financial support for new associations.
- Extend capacity development and support services.

CREATING A NATIONAL ENABLING ENVIRONMENT

- Foster competition through appropriate regulation and transparency.
- Provide long-term and integrated enterprise support.
- Reorient the government bureaucracy towards service.
- Revitalize rural representation.

BOX: CLIMATE CHANGE AND THE POOR: RESILIENCE AND ADAPTATION

OF THE 2.6 BILLION PEOPLE WHO LIVE ON less than \$2 per day, almost 2 billion live in rural areas, in countries whose economies and people are most dependent on natural resources (World Bank 2007a:63; Ravallion et al. 2007:39). Efforts to meet the Millennium Development Goal of cutting poverty in half in such areas are being stymied by the already-evident impacts of climate change, which has been called “today’s crisis, not tomorrow’s risk” for developing countries (Alexander 2008).

While climate change impacts will be uneven around the globe, the human impact will be greatest where the poor live—countries at the lower latitudes. Whether the effects relate to food production, human health, desertification, or flooding, location does matter as far as climate change is concerned (World Bank 2007b).

Some of the examples of the expected effects of climate change:

- Water will be the defining element of climate change impacts: too much water in the form of more severe storms and resultant flooding, as experienced in 2007 in Bangladesh, or too little, as with desertification—“potentially the most threatening ecosystem change impacting the livelihoods of the poor” (MA 2005:4). According to the Millennium Ecosystem Assessment, desertification is projected to get worse in Africa and Central Asia, and climate change is a key cause (MA 2005:1). More than 300 million Africans, out of a population of some 930 million, live in drought or drought-prone areas (IPCC 2007:437).

- The Himalayan glaciers are receding at an unprecedented pace. More than 500 million people in southern Asia depend on this previously predictable glacial melt for water, primarily for agriculture. Now that source is at risk (IPCC 2007:493).

- Agriculture depends on water. In southern Asia, where population growth is expected to add at least 1 billion people by 2050, various climate scenarios project decreases in rice and cereal production of up to 10 percent (UNFPA 2007:91; IPCC 2007:480-481).

- A 1-meter rise in sea level—the minimum forecast for this century—has the potential to displace nearly 6 million people across South Asia, with Bangladesh’s coastal population most threatened. In East Asia, the outlook is even bleaker: a 1-meter rise would displace more than 37 million people, mostly in Vietnam’s Mekong and Red River Delta basins (Dasgupta et al. 2007:2, 28-35).

A recent report on adaptation policy options argued that vulnerability to climate change was a function of two factors: the degree to which an area is exposed—itsself a function of climate conditions and the extent and character of the vulnerable area—and the area’s capability to respond or adapt (Burton et al. 2006:3).

The countries that are home to the majority of the world’s poor are also, by and large, countries with the least developed economies and with a lack of financial and technical resources to support efforts to mitigate climate change effects. They are the least resilient, the most vulnerable.

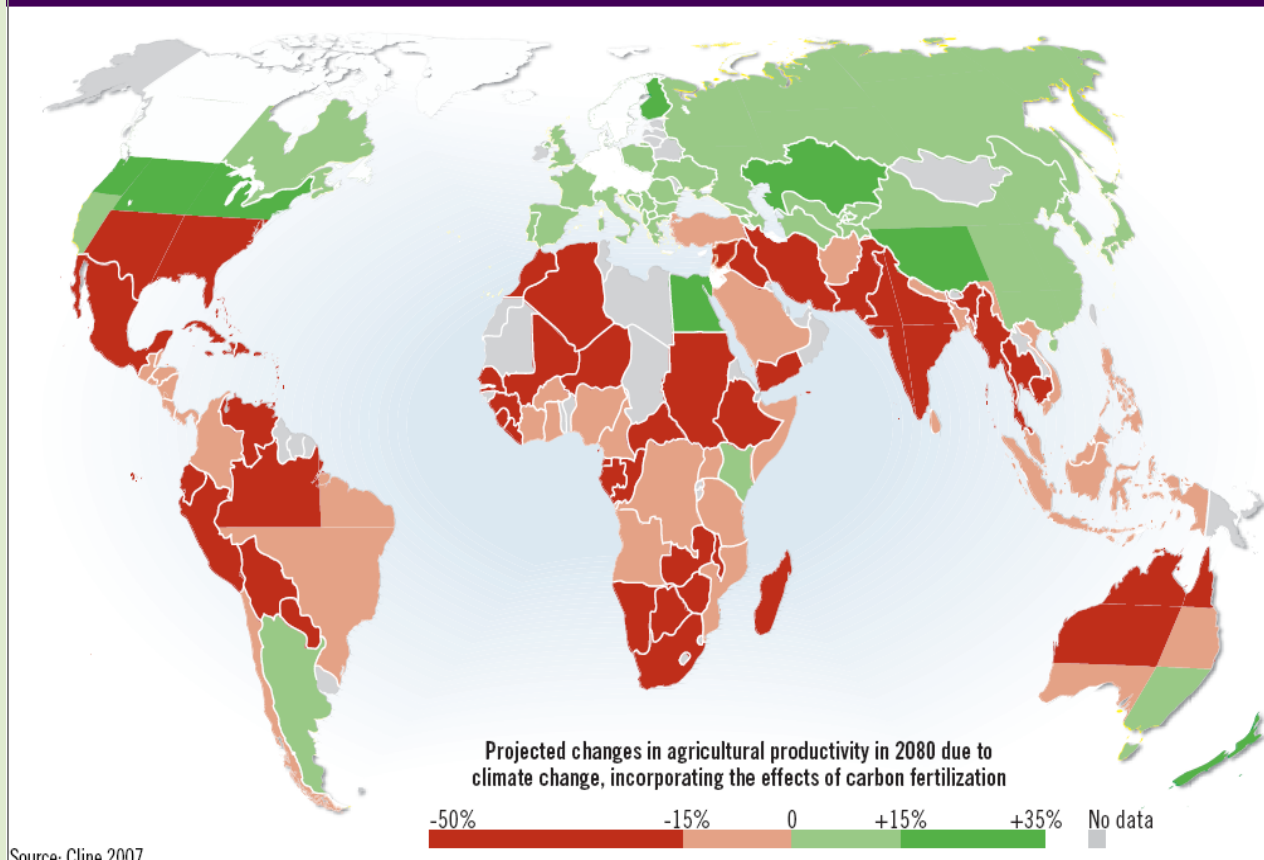
The poor have limited choices: they can stay where they are and manage the future that faces them with whatever means and mechanisms they might have. Or they can move. Though migration may be a necessary recourse for people confronted with conflict or persecution, it must be viewed as the option of last resort.

The World Bank’s recent assessment of poverty states that for at least the next 80 years the majority of the poor living on less than \$2 per day will live in rural areas (Ravallion et al. 2007:26). That reality defines how the development community must manage the twin and inextricable challenges of abject poverty and climate change.



BOX: CLIMATE CHANGE AND THE POOR

PROJECTED CHANGES IN AGRICULTURE IN 2080 DUE TO CLIMATE CHANGE

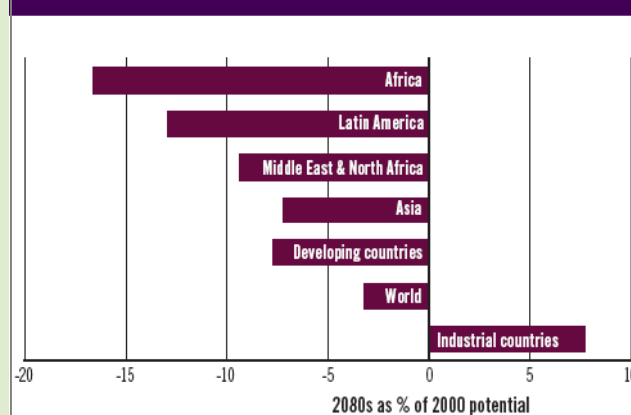


For the almost 2 billion people already living marginal existences in rural areas, large-scale interventions are not practical or likely. They must be better able to confront the new environmental conditions brought on by climate change so as to maintain and perhaps improve their own circumstances.

Adaptation to the natural variability in climate has been part of rural life for centuries. Anti-poverty strategies that build on the natural resource base and engage the self-interest of the poor have shown the potential to provide a number of important benefits. As the case studies in this book detail, communities that have developed nature-based enterprises have not only improved their livelihoods, they have, over time, become more capable, more adaptable, and more resilient as a result.

That resilience has many dimensions. There is economic resilience, as communities realize income from sustainable management of natural resources, including smallholder agriculture. There is social resilience born of community engagement in the development and operation of such enterprises. And there is

CHANGE IN AGRICULTURAL OUTPUT POTENTIAL, 2000-2080



environmental or ecosystem resilience from the improved stewardship of natural resources when they come under community control.

BOX: CLIMATE CHANGE AND THE POOR

The case studies in this book describe programs that were not begun in response to the threat of climate change, yet they had the effect of providing communities with the skills and the tools to help them adapt to that threat. For example, the work of the Watershed Organisation Trust in India has already generated a range of important benefits—social and economic—for almost 500 watershed communities. Water tables have risen, more land can be irrigated, more livestock can be raised, and there is more paid work for those who do not own land. Other benefits include increased crop variety, including new cash crops; increased income; and increased social cohesion as heads of families leave less frequently to find work elsewhere during what used to be long dry periods.

At the same time that the livelihoods of village residents have improved, restoration efforts have made the environment on which they depend—the watershed—more resilient to the expected impacts of climate change.

The same holds true for the farmers in Niger. It has taken more than two decades to restore their agricultural lands to increased fertility and productivity. Now almost half the cultivated land in the country has been “re-greened,” densely covered with crops, shrubs, and trees, all of which have contributed to significant increases in food production and improved economic circumstances. Soil and water conservation techniques have resulted in elevated water tables, richer soil, and the reclaiming of over 250,000 hectares of barren land to productive agricultural use. (See Chapter 3: *Turning Back the Desert: How Farmers Have Transformed Niger’s Landscapes and Livelihoods*.)

Niger is one of a number of countries in sub-Saharan Africa whose agricultural productivity has been predicted to be adversely affected by climate change. While it is impossible to predict what will ultimately happen in Niger, we know that up to half of the country’s farmers have adopted land management techniques that make them far more resilient in the future.



BOX: CLIMATE CHANGE AND THE POOR



The model of enterprise promotion outlined in this book holds promise for addressing the persistence of rural poverty. It appears to deliver other important benefits as well. In the most recent Climate Change Assessment from the Intergovernmental Panel on Climate Change (IPCC), Working Group II identified the critical determinant of “adaptive capacity:” the ability to make the changes in land use, economic activity, and social organization necessary to respond to climate change. It is worth noting that many of them are the same elements necessary for establishing community nature-based enterprises. The IPCC offered this list of determinants of adaptive capacity from the literature (IPCC WG II 2007:816):

- Access to economic and natural resources
- Entitlements (property rights)
- Social networks
- Institutions and governance
- Human resources
- Technology

There are no guarantees, but experience shows that the poor, rural communities that have nurtured robust nature-based enterprises have, in the process, become more resilient to challenge and more capable of dealing successfully with change in the future.

UNITED NATIONS DEVELOPMENT PROGRAMME

UNDP is the UN's global development network, an organization advocating for change and connecting countries to knowledge, experience and resources to help people build a better life. We are on the ground in 166 countries, working with them on their own solutions to global and national development challenges. As they develop local capacity, they draw on the people of UNDP and our wide range of partners.

World leaders have pledged to achieve the Millennium Development Goals, including the overarching goal of cutting poverty in half by 2015. UNDP's network links and coordinates global and national efforts to reach these Goals. Our focus is helping countries build and share solutions to the challenges of:

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- Poverty Reduction
- Crisis Prevention and Recovery
- Environment and Energy
- HIV/AIDS

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- Investing in people, particularly through basic health and education
- Protecting the environment
- Supporting and encouraging private business development
- Strengthening the ability of the governments to deliver quality services, efficiently and transparently
- Promoting reforms to create a stable macroeconomic environment, conducive to investment and long-term planning
- Focusing on social development, inclusion, governance, and institution building as key elements of poverty reduction.

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UNITED NATIONS ENVIRONMENT PROGRAMME

UNEP, established in 1972, is the voice for the environment within the United Nations system. UNEP acts as a catalyst, advocate, educator and facilitator to promote the wise use and sustainable development of the global environment. To accomplish this, UNEP works with a wide range of partners, including United Nations entities, international organizations, national governments, non-governmental organizations, the private sector and civil society.

UNEP work encompasses:

- Assessing global, regional and national environmental conditions and trends
- Developing international and national environmental instruments
- Strengthening institutions for the wise management of the environment
- Facilitating the transfer of knowledge and technology for sustainable development
- Encouraging new partnerships and mind-sets within civil society and the private sector

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WORLD RESOURCES INSTITUTE

The World Resources Institute (WRI) is an environmental think tank that goes beyond research to find practical ways to protect the earth and improve people's lives.

Our mission is to move human society to live in ways that protect Earth's environment and its capacity to provide for the needs and aspirations of current and future generations.

Because people are inspired by ideas, empowered by knowledge, and moved to change by greater understanding, WRI provides—and helps other institutions provide—objective information and practical proposals for policy and institutional change that will foster environmentally sound, socially equitable development.

WRI organizes its work around four key goals:

- People & Ecosystems: Reverse rapid degradation of ecosystems and assure their capacity to provide humans with needed goods and services.
- Governance: Empower people and support institutions to foster environmentally sound and socially equitable decision-making.
- Climate Protection: Protect the global climate system from further harm due to emissions of greenhouse gases and help humanity and the natural world adapt to unavoidable climate change.
- Markets & Enterprise: Harness markets and enterprise to expand economic opportunity and protect the environment.

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A Guide to WORLD RESOURCES

2008

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United Nations
Environment Programme

World Bank

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Institute

NATURE IS AN ESSENTIAL YET ELUSIVE ASSET FOR THE WORLD'S POOR. It routinely provides subsistence livelihoods for poor rural households but little prospect for creating opportunity, wealth, and security—the foundations of well-being. This need not be so.

The reality of poverty today is that almost half the world's population lives on less than \$2 per day and that some 75 percent of them, almost 2 billion, live in rural areas largely dependent on natural resources for their livelihoods. *World Resources 2008* argues that properly designed enterprises can improve those livelihoods and, in the process, create resilience—economic, social, environmental—that can cushion the impacts of climate change, can keep communities rooted, and can help provide needed social stability.

The report builds on *World Resources 2005: The Wealth of the Poor*, which showed that ecosystems can become the focus of a powerful model for nature-based enterprise that delivers continuing economic and social benefits to the poor, even as it sustains the natural resource base. Evidence shows that poor rural families empowered with secure resource rights can increase their income stream from nature significantly with prudent ecosystem management.

World Resources 2008 explores what is necessary to allow such nature-based enterprises to scale up so as to have greater impact—geographically, economically, politically. It identifies three critical elements: community ownership and self-interest; the role of intermediate organizations in providing skills and capacity; and the importance of networks—formal and informal—as support and learning structures. It outlines specific actions that governments at all levels can take to encourage and support such change.

When these three elements are present, communities can begin to unlock the wealth potential of ecosystems in ways that actually reach the poor. In so doing they build a base of competencies that extends beyond nature-based enterprises and supports rural economic growth in general, including the gradual transition beyond reliance on natural resource income alone.

They also acquire greater resilience. It is the new capacities that community members gain—how to conduct a successful business, how to undertake community-based projects, and how to build functional and inclusive institutions—that give rise to greater social and economic resilience. It is the insight that ecosystems are valuable assets that can be owned and managed for sustained benefits that builds the foundation of ecological resilience. Together, these three dimensions of resilience support the kind of rural development whose benefits persist in the face of a wide variety of challenges, environmental and otherwise, that poor communities are sure to face in the future.

World Resources 2008 is the twelfth volume in the series. In conjunction with EarthTrends, it presents a full range of statistics on environmental and development trends. A Spanish edition, *Recursos Mundiales 2009: Las Raíces de la Resiliencia*, is available online at <http://buenosdiasplaneta.org>.

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