The establishment of the Millennium Development Goals and national Poverty Reduction Strategies has raised hopes that governments and multilateral institutions can be mobilized to address world poverty.

SPECIAL SECTION

GLOBAL DEVELOPMENT POLICIES

MAKING THE MDGs AND PRSPs WORK FOR THE POOR AND THE ENVIRONMENT

IN THE PRECEDING CHAPTERS AND CASE STUDIES WE HAVE approached poverty reduction from the village and local level—the level where ecosystems are accessed for income. We have presented numerous examples of how community-scale projects have improved the livelihoods of the poor by enabling them to manage fisheries, forests, and common lands for income and sustainability.

But the rural village economy we have focused on exists within a national and international framework of economic, legal, and political policies. This special section deals with innovations in poverty policies at these larger scales. In the past five years, two developments have raised hopes that national governments and multilateral institutions can be mobilized to address world poverty: the establishment of the **Millennium Development Goals** (MDGs) and the crafting of national **Poverty Reduction Strategies** (PRSPs). In this section we explore how the concepts of environmental income and pro-poor environmental governance apply to these efforts. A key link between MDG and PRSP processes and the world's poor is the environment. The central question is: Do the Millennium Development Goals and the current crop of Poverty Reduction Strategies incorporate the environment and governance as central features in fighting poverty? And if not, how can they be made to incorporate these themes?

THE MILLENNIUM DEVELOPMENT GOALS

A Break from the Past

In September 2000, the largest-ever gathering of world leaders adopted the United Nations Millennium Declaration. The cornerstone of the Millennium Declaration is a global agenda of eight development goals, known as the Millennium Development Goals (MDGs), for cutting world poverty in half by 2015. The MDGs have been described as "the most broadly supported, comprehensive, and specific poverty reduction targets the world has ever established" and the "fulcrum" on which international development policy pivots (UN Millennium Project 2005:2-4).

In many ways, the MDGs represent an innovative approach to ending poverty worldwide. They constitute a break with business-as-usual in the formulation of international development policy and the delivery of development aid. The MDGs address extreme poverty in many dimensions, including hunger, disease, and lack of adequate shelter, while also committing nations to take action to promote gender equality, education, and environmental sustainability. *(See Table 1.)* The Goals condense and refocus the as-yet-unrealized anti-poverty commitments of the past several decades into an action-oriented agenda.

Perhaps the most important contribution of the MDGs is their infusion of accountability into the global campaign against poverty. The establishment of quantified, time-bound targets and measurable indicators creates a benchmark for tracking progress in reaching the Goals. The requirement for countries to produce periodic MDG progress reports introduces a modicum of transparency that has been conspicuously absent from many international processes.

If these innovative aspects of the MDGs propel them to ultimate success by 2015, the world will look quite different than it might otherwise have looked, given the disappointing development trajectory of the 1990s. Reaching the MDGs and their associated development targets would mean lifting 500 million of the world's people out of extreme poverty, liberating 300 million from the suffering of hunger, and providing 350 million additional people with a reliable, sustainable source of safe drinking water (UN Millennium Project 2005:1).

How is the world faring with efforts to attain the MDGs? The results so far have been mixed. In early 2005, the findings of several monitoring studies were published as part of a five-year stock-taking of MDG progress. These reports generally portray a spotty track record that differs by global region and across the various Goals. With respect to halving income poverty (MDG-1), one study noted that East Asia had already achieved the Goal, and South Asia is on target, but in Sub-Saharan Africa, most countries are in danger of falling far short (IMF and World Bank 2005:2). Another report concluded that much of the sub-Saharan region—faced with continuing hunger and malnourishment as well as high levels of child and maternal mortality—is seriously off track for reaching most of the Goals. Even in Asia, where progress has been most rapid, hundreds of millions of people still live in extreme poverty. Other global regions—such as Latin America, North Africa and the Middle East, and the transitional economies of the former Soviet Union—have mixed records, with slow or no progress on some of the Goals (UN Millennium Project 2005:15). *(See Figure 1.)*

For Environment and Governance, More of the Same

Despite the innovative aspects of the MDG approach, the treatment of the environment and governance in the MDGs harkens back to old, outmoded ways of thinking. The environment is seen as an add-on rather than the essential foundation of all human well-being and economic production. From an operational perspective, environmental sustainability is more of an afterthought than a cross-cutting concept that provides a point of orientation for all of the MDGs.

The seventh of the eight MDGs commits nations to "ensure environmental sustainability," but this vaguely worded goal does little to focus the attention of the world on the central role of the environment in supporting pro-poor economic growth. As currently stated, Millennium Development Goal 7 (MDG-7) may actually be doing more harm than good by making it difficult for nations to perceive, much less act on, crucially important links between poverty reduction and environmental sustainability. Many believe that environmental issues have in fact lost ground in international development circles in the past decade or so, precisely because of the difficulty in pinning down the concept of environmental sustainability in a way that governments can understand and put to use in decision-making. In its current construction, MDG-7 only exacerbates this dilemma.

Focused on the Wrong Nature

To track progress toward reaching MDG-7 on environmental sustainability, the MDG framework establishes three *global targets* and eight *global indicators*. Unfortunately, these targets and indicators fail to capture the aspects of the environment that exert the most powerful impacts on the lives of the poor or that show the most promise for ending extreme poverty.

Target 9, the first of the three MDG environmental targets, calls for countries to "integrate the principles of sustainable development into country policies and programs and reverse the loss of environmental resources." Accompanying this rather vague, general statement are five quantitative indicators. *(See Table 2.)* One of these (Indicator 29: Proportion of population using solid fuels) is directly relevant to how the poor use the environment. But the other Target 9 indicators fail to shed much light on aspects of environmental sustainability that matter most to the poor. Instead, some of the current indicators track issues of global environmental concern, such as per capita carbon

TABLE 1 THE MILLENIUM DEVELOPMENT GOALS

Goal 1: Eradicate extreme poverty and hunger	**Target 1:** Halve, between 1990 and 2015, the proportion of people whose income is less than $1 per day **Target 2:** Halve, between 1990 and 2015, the proportion of people who suffer from hunger
Goal 2: Achieve universal primary education	**Target 3:** Ensure that by 2015 children everywhere, boys and girls alike, will be able to complete a full course of primary schooling
Goal 3: Promote gender equality and empower women	**Target 4:** Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015
Goal 4: Reduce child mortality	**Target 5:** Reduce by two thirds, between 1990 and 2015, the under-five mortality rate
Goal 5: Improve maternal health	**Target 6**: Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio
Goal 6: Combat HIV/AIDS, malaria, and other diseases	**Target 7:** Have halted by 2015 and begun to reverse the spread of HIV/AIDS **Target 8:** Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases
Goal 7: Ensure environmental sustainability	**Target 9:** Integrate the principles of sustainable development into country policies and programs, and reverse the loss of environmental resources **Target 10:** Halve by 2015 the proportion of people without sustainable access to safe drinking water and basic sanitation **Target 11:** Have achieved by 2020 a significant improvement in the lives of at least 100 million slum dwellers
Goal 8: Develop a global partnership for development	**Target 12:** Develop further an open, rule-based, predictable, nondiscriminatory trading system (includes a commitment to good governance, development, and poverty reduction—both nationally and internationally) **Target 13:** Address the special needs of the Least Developed Countries (includes tariff- and quota-free access for Least Developed Countries' exports, enhanced program of debt relief for heavily indebted poor countries [HIPCs] and cancellation of official bilateral debt, and more generous official development assistance for countries committed to poverty reduction) **Target 14:** Address the special needs of landlocked developing countries and small island developing states (through the Program of Action for the Sustainable Development of Small Island Developing States and 22nd General Assembly provisions) **Target 15:** Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term **Target 16:** In cooperation with developing countries, develop and implement strategies for decent and productive work for youth **Target 17:** In cooperation with pharmaceutical companies, provide access to affordable drugs in developing countries **Target 18:** In cooperation with the private sector, make available the benefits of new technologies, especially information and communications technologies

Source: United Nations 2000a

dioxide emissions and consumption of ozone-depleting chemicals. Others touch on issues of importance to the poor, such as land area covered by forests and land area set aside to protect biodiversity, but do not measure directly the ability of the poor to access key ecosystems as a source of environmental income and sustainable livelihoods or to protect the ecosystems on which they depend from depredation and damage by outside interests and powerful elites.

Targets 10 and 11, the second and third MDG environmental targets, commit nations to "halve by 2015 the proportion of people without sustainable access to safe drinking water and sanitation" and to "have achieved by 2020 a significant improvement in the lives of at least 100 million slum dwellers." These targets and their accompanying indicators are more directly propoor, but they too fall short when it comes to establishing broad markers for progress based on an explicit recognition of ecosystem integrity as the touchstone for sustainability. For instance, under Target 10, countries should focus not just on the numbers of people hooked up to water and sanitation services, but also on the need for integrated water resource planning and policies that take account of a wide range of other considerations. These include water demand, water supply, and water quality issues, as well as water-project impacts on other community objectives and on environmental management goals. Other suitable indicators could focus on governance issues that relate to the poor's access to water, such as the reliability of water service or the pricing of water service relative to income.

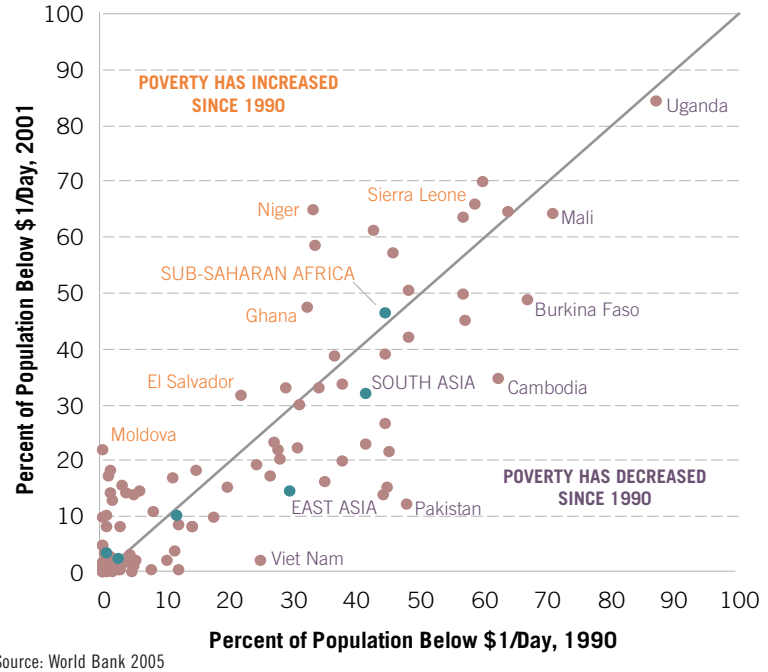
At the 2002 World Summit on Sustainable Development in Johannesburg, the international community created additional targets related to environmental sustainability, sometimes

referred to as "MDG-Plus" targets. *(See Table 3.)* These targets specifically incorporate pro-poor elements related to sustainable management and use of ecosystems, such as application of the ecosystem approach in conserving biodiversity as well as maintaining or restoring fish stocks to levels that can support sustainable yields.

Realizing that the MDG targets were broad in their outlines, the MDG framers encouraged countries to modify the global MDG-7 targets to suit their local conditions, as well as to establish new, country-specific targets and indicators. A recent UNDP review shows that about half the 100 reporting countries have set one or more MDG-7 targets that modify or add to the global targets (UNDP 2005a:3). For example, several nations have set specific goals for maintaining or increasing forest cover, or expanding the network of protected areas for biodiversity conservation.

But despite these worthy efforts, countries are not, for the most part, paying sufficient attention to developing and reporting on a broad set of targets and indicators that would accurately gauge their progress toward the goal of MDG-7 of ensuring environmental sustainability. UNDP's analysis of MDG-7 implementation suggests that environmental monitoring and reporting are not being undertaken systematically. Lack of available data is a significant constraint for some

FIGURE 1 PROGRESS TOWARD MDG-1: HALVE EXTREME POVERTY BY 2015



This graph shows changes in poverty from 1990 to 2001. In countries below the line, extreme poverty has decreased during that period. Countries above the line have seen an increase in those living on a dollar a day. Selected outlying countries and regions are identified.

Source: World Bank 2005

TABLE 2 MDG-7 (MILLENNIUM DEVELOPMENT GOAL #7): GLOBAL TARGETS AND INDICATORS

Targets	Indicators
Target 9. Integrate the principles of sustainable development into country policies and programs and reverse the loss of environmental resources	25. Proportion of land area covered by forests 26. Ratio of area protected to maintain biological diversity to surface area 27. Energy use per $1 GDP 28. Carbon dioxide emissions (per capita) and consumption of ozone-depleting chlorofluorocarbons 29. Proportion of population using solid fuels
Target 10. Halve, by 2015, the proportion of people without sustainable access to safe drinking water and sanitation	30. Proportion of population with sustainable access to an improved water source (urban and rural) 31. Proportion of population with access to improved sanitation
Target 11. Have achieved, by 2020, a significant improvement in the lives of at least 100 million slum dwellers	32. Proportion of households with access to secure tenure

Source: United Nations 2000b

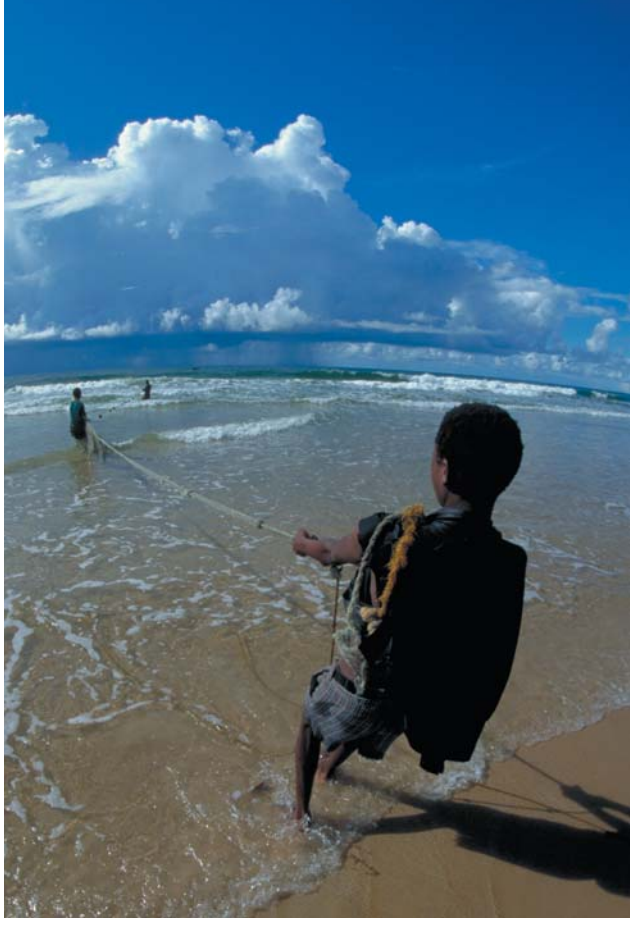


TABLE 3 ADDITIONAL TARGETS AGREED TO AT THE WORLD SUMMIT ON SUSTAINABLE DEVELOPMENT

Biodiversity	■ Encourage by 2010 the application of the ecosystem approach (Paragraph 30) ■ Establish representative marine protected area networks by 2012 (Paragraph 32) ■ Achieve by 2010 a significant reduction in the current rate of loss of biodiversity (Paragraph 44)
Fisheries	■ Maintain or restore fish stocks to a level that can produce a sustainable yield by 2015 (Paragraph 31)
Water	■ Develop integrated water resources management and water efficiency plans by 2005 (Paragraph 26)
Chemical Pollution	■ By 2020, minimize significant adverse effects on human health and the environment associated with the production and use of toxic chemicals, via use of transparent, science-based risk assessment and risk management procedures, and taking account of the precautionary principle (Paragraph 23)

Source: United Nations 2002, Johannesburg Plan of Implementation

countries. But at the same time, many countries have not drawn on existing data from other environment-related efforts, such as National Strategies for Sustainable Development, State of the Environment Reports, and National Biodiversity Action Plans (UNDP 2005b:5).

Getting the Targets and Indicators Right

One of the most important innovations of the MDG approach is its ability to make governments more accountable for their performance in improving human well-being. By stating goals and measuring progress in clear, straightforward language, the MDGs make it easy for civil-society groups to evaluate progress toward human development goals and to issue a public "report card" on a government's success or failure. Unfortunately, the lack of clear, comprehensive targets and indicators for measuring the capacity of ecosystems to provide sustainable environmental income for the poor means that the "accountability effect" of the MDG approach is not yet applicable to the world's environmental goals. Until the environmental framework of the MDGs is fixed, short-run progress towards the other goals is at risk of being unsustainable.

Realigning the MDG framework to correct its environmental shortcomings begins with an acceptance of ecosystems as the key to environmental income, the most direct way that nature affects the poor. This realignment should be guided by the recent findings of the Millennium Ecosystem Assessment, a four-year study conducted by more than 1,300 scientists from 95 countries to ascertain the consequences of ecosystem change for human well-being (MA 2005a). The scientists determined that in all regions, and particularly in Sub-Saharan Africa, the condition and management of ecosystems is a "dominant factor" affecting the chances of success in fighting poverty. They concluded that the degradation of ecosystems is already a "significant barrier" to achieving the MDGs. In fact, many of the regions facing the biggest hurdles in reaching the MDGs coincide with those experiencing significant ecosystem degradation (MA 2005a:18).

Reconceptualizing Target 9

Reframing MDG-7 requires that the wording of Target 9—not to mention its conceptual underpinnings—should make clear the importance of ecosystems to the poor, and be grounded in an appreciation of the central role of healthy, well-functioning ecosystems in ensuring sustainability.

The current wording of Target 9 has two quite distinct pieces:

Target 9: (1) **"Integrate the principles of sustainable development into country policies and programs and** (2) **reverse the loss of environmental resources."**

Both pieces need to be treated separately and reworded. In addition, another component needs to be added to Target 9 to capture the importance of natural resource access to the poor. *(See Table 4 for a summary of suggested changes in the wording and indicators of Target 9, as discussed below.)*

1. Focus on ecosystem capacity

Let's first deal with the second half of Target 9: "reverse the loss of environmental resources." Conceptually, this is the most

TABLE 4 SUGGESTED REWORDING OF MDG-7, TARGET 9

Targets	Indicators
Target 9 (original wording). Integrate the principles of sustainable development into country policies and programs and reverse the loss of environmental resources	■ Proportion of land area covered by forests ■ Ratio of area protected to maintain biological diversity to surface area ■ Energy use per $1 GDP ■ Carbon dioxide emissions (per capita) and consumption of ozone-depleting chlorofluorocarbons ■ Proportion of population using solid fuels
Target 9a (reworded). Maintain or restore the capacity of ecosystems to provide critical ecosystem services, and Integrate the principles of sustainable development into local, national, and international policies and programs	■ Extent and condition of communal fisheries (coastal and inland) ■ Extent and condition of forested areas held in common ■ Watershed conditions on communally held lands (e.g. vegetative cover; water availability; groundwater trends) ■ Soil fertility on private farmlands ■ Land degradation
Target 9b (new). Ensure the poor access to environmental resources and decision-making	■ Proportion of rural households with access to secure tenure ■ Proportion of rural households with access to environmental information (e.g. extension services; pollution or environmental health alerts; environmental impact studies on proposed concessions or developments) ■ Participation in local environmental decision-making

important section of the target. To refocus this section of the target on ecosystems—the primary "environmental resources" used by the poor—the current wording should be replaced with the following: **"maintain or restore the capacity of ecosystems to provide critical ecosystem services."**

As the Millennium Ecosystem Assessment demonstrates, humans have changed ecosystems extensively over the past 50 years. Most ecosystem services are being used unsustainably, and the capacity of ecosystems to deliver these services is being persistently eroded. This growing pressure on ecosystems risks sudden, potentially irreversible changes, such as the collapse of fisheries or the creation of "dead zones" in coastal waters. Also, because the costs of the damage are borne disproportionately by the poor, ecosystem degradation contributes to inequities across social and ethnic groups and is sometimes the principal factor behind poverty and social conflict (MA 2005a:17).

Environmental sustainability, then, is defined by maintaining the ability of ecosystems to deliver the ecosystem services that rich and poor depend on. Some degree of tradeoff between different kinds of ecosystem services is inevitable as human populations expand and as poor people around the world aspire to higher standards of living. However, the key is to ensure that these tradeoffs are managed in ways that preserve the overall integrity of ecosystems and their capacity to provide the full range of services valued by humans.

2. Reconceptualize Target 9 indicators

Indicators for a realigned MDG Target 9 should be focused around those aspects of ecosystem function and integrity that bear most directly on the livelihoods of the poor. For example, the rural poor in developing countries rely on common pool resources to generate significant amounts of environmental income as an important component of their livelihoods. At least some of the indicators for MDG Target 9 should capture this. Potential indicators that would reflect the state of common pool resources and the associated income opportunities they afford include:

- extent and condition of communal fisheries (coastal and inland);
- extent and condition of forested areas held in common;
- watershed conditions on communally held lands (e.g., vegetative cover and water availability, including groundwater trends).

Cambodia provides an example of good practice here. Officials were thinking along these lines when they created their own MDG-7 targets and indicators, which track communally held resources of direct importance to the rural poor (UNDP 2005c:6). Their indicators include:

- the proportion of fishing lots released to local communities (targeted to reach 60 percent by 2015, up from 56 percent in 1998), and
- the number of community-based fisheries (targeted to reach 589 in 2015, up from 264 in 2000).

In addition to tracking common pool resources, Target 9 indicators should acknowledge the reliance poor households place on small-scale farming. Relevant indicators would include:

- soil fertility (such as nutrient availability or percentage of organic matter in top soil;
- land degradation (such as salinization; waterlogging; soil loss).

3. Include all institutions; add targets and time-tables

As currently worded, the first half of Target 9 states: "Integrate

the principles of sustainable development into country policies and programs." This component of Target 9 should be widened to explicitly encompass key institutions at other levels of governance, including local, provincial, and international agencies. In other words, this section of Target 9 should be worded: **"Integrate the principles of sustainable development into local, national, and international policies and programs."** MDG-7 commits institutions at all levels of governance to make environmental sustainability a reality on the ground, and the wording of Target 9 should clearly reflect this. All such institutions, and not just national-level ones, should be accountable for their performance in this respect, and should report regularly on their progress.

In addition, the general intent of this target needs to be translated into specific, time-framed actions that can be monitored from year to year. Revamping Target 9 to make this element verifiable and time-bound is crucial to the ability of civil society to hold government accountable and exert pressure for improved performance.

4. Add a target that ensures resource access

Target 9, as currently worded, does not capture the importance of access—both physical access to resources as well as access to information and participation in environmental decision-making—to the livelihoods of the poor. The importance of access, manifest in secure tenure and community-level institutions that are poor-friendly, is one of the principal conclusions of Chapter 3. When we say that the MDGs should better reflect the importance of environmental governance to the poor, this is the governance we mean. The "sustainability" that MDG-7 is meant to ensure is only meaningful if the poor share "environmental access"—the combination of physical access and environmental empowerment. This kind of environmental access is the basis of equity in the use of ecosystems—certainly one of the components of sustainability.

Target 9 cannot really accommodate these concepts; they should be captured in a separate Governance Target that could read: **"Ensure the poor access to environmental resources and decision-making."** Such a target would be directed at institutions of governance at all levels: national, sub-national, and international.

Indicators for this target should revolve around:

- tenure (proportion of rural households with secure tenure to the resources on which their livelihoods are based),
- access to environmental information (proportion of rural households with access to official information, such as extension services on ecosystem-based agricultural management), and
- participation in local environmental decisions (indicators of pro-poor decentralization of decision-making on environmental management).

Monitoring and developing indicators of environmental governance is still a relatively new field, and such indicators might have to be adjusted for each nation. However, Cambodia again offers an example of best practice. Officials have set targets and indicators encompassing rural tenure, including an overall target of increasing the proportion of the population in both urban and rural areas with access to land security, as well as increasing the percentage of land parcels having titles in both urban and rural areas from 15 percent in 2000 to 65 percent in 2015 (UNDP 2005c:6).

Encouraging Environment and Governance as Cross-Cutting Themes

Environment and governance must be used as screens and points of orientation for all the other Goals, not just MDG-7. The MDGs are designed to be a collection of interdependent goals that must be pursued in concert with one another. Integrated strategies featuring interventions that advance multiple goals and targets simultaneously will have faster, deeper, more cost-effective, and more lasting impact on human well-being than sequential measures addressing individual goals in isolation. However, all too often, governments operate as if the goals were separate, independent entities, resulting in little coordination or cooperation between various ministries and agencies whose actions bear importantly on the likelihood of reaching MDG targets by 2015.

To be effective, MDG-7 on ensuring environmental sustainability must prompt us to raise questions about how strategies and activities under each of the other goals affect the environment and the long-term capacity of ecosystems to provide the fundamental services required for human survival and well-being. Governments and institutions that fail to recognize this reality and act upon it are at high risk that the investments and reforms they advocate for reaching one goal are likely to undermine efforts to reach another goal. Nowhere is this more true than in the case of the environmental assets of the poor and the potential for environmental income to contribute to poverty reduction.

An integrated approach to meeting the MDG targets should be focused on improved management of ecosystems and their capacity to sustainably deliver multiple types of ecosystem services (MA 2005b:19.2). A goal-by-goal analysis of the implications of ecosystem conditions for achieving the 2015 MDG targets indicates that most of them depend directly on ecosystem services, including the targets on poverty, hunger, gender equality, child mortality, disease, and sustainable development. Moreover, multiple MDGs depend on the same ecosystem services (MA 2005b:19.4-5).

To reach all the MDGs simultaneously, it is crucially important to look carefully across the board at the required investments in ecosystem services (that is, the continued capacity of ecosystems to provide provisioning, supporting, and regulating services) and the necessary governance reforms and institutional capacity-building. For instance, interventions to reach MDG Target 1 on eradicating extreme poverty must fully explore and integrate the role that ecosystems and their services can play in improving livelihoods. Similarly, efforts to reach

TABLE 5 SOME EXAMPLES OF COUNTRY/CONTEXT-SPECIFIC MDG-7 TARGETS

Global Target 9	Modified or New Targets
Forest cover	■ Maintain at least 60% of the country under forest cover in perpetuity (Bhutan) ■ Maintain forest cover at 60% (2000 level) through 2015 (Cambodia) ■ Increase forest cover from 8.2% in 2000 to 9.0% in 2015 (Mongolia) ■ Increase afforestation rate from 27% to 35% by 2040 (Romania) ■ Increase forest cover from 11.9 million ha in 2000 to 12.8 million ha in 2015 (Senegal) ■ Increase forest cover by 115,000 ha between 2002 and 2006 (Tunisia) ■ Extend forest cover to 43% by 2010 (Vietnam Nam)
Protected areas	■ Increase ratio of protected territories from 34.9% in 1990 to 35.9% in 2015 (Bulgaria) ■ Maintain 23 protected areas (3.3m ha, 1993) and 6 forest-protected areas (1.35m ha) through 2015 (Cambodia) ■ Increase proportion of areas covered by natural protectorates to 25% by 2015 (Egypt) ■ Protected areas and reserves to cover 10.8% of the national territory (Gabon) ■ Increase area protected to maintain biological diversity from 0.2% in 1990 to 1.9% in 2015 (Kyrgyzstan) ■ Increase land area protected to maintain biological diversity from 13.2% in 2000 to 30% in 2015 (Mongolia) ■ Increase proportion of protected land area from 2.56% in 1990 to 19% by 2015 (Romania) ■ Increase area protected for biological diversity from 8% in 1990 to 12% in 2015 (Senegal) ■ Expand network of national and biosphere reserves and national parks to 10.4% of overall territory (Ukraine)
Energy and climate change	■ Reduce CO_2 emissions against 1988 baseline in fulfillment of Kyoto Protocol obligations (Bulgaria) ■ Reduce greenhouse gas emissions by 8% of CO_2 equivalent between 2008 and 2012 (Romania) ■ Increase use of renewable energy in electricity generation from 29% in 1999 to 33.6% in 2015 (Slovenia) ■ Increase share of renewable energy to 8% of commercial primary energy by 2011 (Thailand)
Pollution	■ Decrease total discharge of major pollutants by 10% between 2000 and 2005 (China) ■ Stabilize ambient air pollution from stationary and mobile sources by 2015 (Ukraine) ■ Attain national standards in air and water pollution by 2005 (Vietnam)

Source: UNDP 2005b

MDG Target 2 on ending hunger need to be based on an ecosystem-focused analysis of how to most effectively maintain and improve soil fertility, water quality and supply, plant genetic resources, watershed management, and so forth.

To date, however, such assessments have rarely been undertaken in national and international planning for the MDGs. The IMF and World Bank have proposed a five-point agenda for accelerating progress toward the MDGs from which improved environmental management is conspicuously absent (IMF and World Bank 2005:3) Since this agenda was developed with particular reference to Sub-Saharan Africa—where ecosystem degradation is a principal constraint to lasting poverty reduction—the omission seems all the more glaring.

Investments in ecosystem services can produce synergistic effects across several targets: for instance, investments in watershed protection can provide multiple benefits in terms of safe drinking water, reduction of waterborne diseases, and flood protection (MA 2005b:19.39). Improved energy services will be a necessary input for reaching most of the MDGs, and a switch to modern, clean fuels and improved cookstove technology will produce multiple dividends related to improved indoor air quality, better child and maternal health, empowerment of women, and environmental sustainability (MA 2005b:19.40-41).

At the same time, some tradeoffs will be necessary, and it is vital to weigh these with reference to environmental and governance considerations. Although the UN Millennium Project is notable for devoting considerable attention to the role of environmental management in meeting the MDGs, its recommendations for reaching the 2015 targets stop short of fully integrating ecosystems as a cross-cutting orientation. For instance, rapid scale-up of MDG-based investments is a focal point for these recommendations, but they contain no discussion of the need to consider trade-offs in critical areas such as infrastructure development (UN Millennium Project 2005:31-35).

One constraint to a cross-cutting, ecosystems-based approach to reaching the MDGs is the inadequacy of environmental monitoring systems in many parts of the developing world. Documenting and assessing progress toward the 2015 targets and the sustainability of critical ecosystem functioning may require strengthening of monitoring systems for soil fertility, hydrological services (water filtration, aquifer recharging, flood prevention), maintenance of biodiversity, climate regulation, and other key ecosystem services (MA 2005b:19.3). Indicators should reflect how local people value ecosystems, including for food, medicines, cultural purposes, and other uses. Most importantly, indicators need to better capture the impact of extracting a particular bundle of services from an ecosystem on its resilience and capacity to provide future services. Investments in measuring, monitoring, and mapping poverty and ecosystem services will give policymakers at local and national levels access to indicators reflecting the linkages between poverty and the environment, which can be used to shape pro-poor growth strategies.

The slow progress that countries and institutions have made on integrating sustainability into their operations is an indication

not of an idea whose time has passed, but rather of the deep structural changes that it requires. In the context of the MDGs, this means that rich countries and international institutions need to lead by example. New and increased long-term financing mechanisms are needed to strengthen environmental capacities and support integrated, ecosystem-based implementation of the MDGs in developing countries. Countries will likely see faster progress on targets aimed at areas such as hunger, water, and sanitation that respond more directly to increased financial and technical inputs (Clemens et al. 2004:26). The experiences gained in these areas of quick response will be an important foundation for longer-term efforts to design and implement national sustainable development strategies.

POVERTY REDUCTION STRATEGIES (PRSPs)

Also in Need of an Environmental Overhaul

Countries seeking debt relief and concessional loans from the World Bank and the International Monetary Fund (IMF) must prepare a Poverty Reduction Strategy Paper (PRSP)—a document detailing the nation's philosophy and plan for achieving substantive cuts in national poverty. PRSPs have also emerged as a principal policy instrument and process for directing aid from developed countries and international agencies to help developing countries implement the Millennium Development Goals.

Unfortunately, like the Millennium Development Goals, the PRSP process suffers from critical shortcomings when it comes to acknowledging the central role of ecosystems in the lives of the poor, and their potential to reduce rural poverty. Among the current crop of PRSPs, the strategies of most countries fall short of a full commitment to better ecosystem management that benefits the poor. Maximizing environmental income opportunities for the poor requires that PRSPs and other formal poverty-reduction plans recognize the importance of their environmental assets, and embody an ecosystem-based perspective to ensure long-term sustainability of rural livelihoods.

CORE PRINCIPLES AND KEY ELEMENTS OF THE PRSP APPROACH

The World Bank has set out five core principles underpinning the development and implementation of Poverty Reduction Strategy Papers (PRSPs):

Country-driven and country-owned. PRSPs should involve broad-based participation by civil society and the private sector at all stages, including formulation, implementation, and outcome-based monitoring.

Results-oriented. PRSPs should focus on outcomes that will benefit the poor.

Comprehensive. PRSPs should recognize the multidimensional nature of poverty and the scope of actions needed to effectively reduce poverty.

Partnership-oriented. PRSPs should involve the coordinated participation of development partners, including bilateral and multilateral agencies and nongovernmental organizations.

Based on medium- and long-term perspectives. PRSPs should recognize that sustained poverty reduction will require action over the medium and long terms as well as in the short run.

The Bank also specifies four key areas of content for PRSPs:

1. Macroeconomic and structural policies to support sustainable growth in which the poor participate.
2. Improvements in governance, including public-sector financial management.
3. Appropriate sectoral policies and programs.
4. Realistic costing and appropriate levels of funding for major programs.

A New Approach to Development?

PRSPs were established in 1999 by the World Bank and IMF as a response to the shortcomings of their earlier development approach centered on "structural adjustment"—an approach that made lending contingent on adoption of certain macroeconomic policies that would change the nation's basic economic structure and prime it for growth. Unfortunately, in many countries following the structural adjustment approach, the promised growth either did not appear or did not result in sufficient poverty alleviation. In fact, in many cases, the approach exacerbated existing inequalities, creating a "crisis of legitimacy" surrounding the lending approach of major development institutions by the mid-1990s (Reed 2004:7).

The intent behind PRSPs was to replace the approach in which the World Bank and IMF attempted to mold a nation's development policies along fixed lines as a condition for lending. Instead, the PRSP approach would let countries decide for themselves which development policies to pursue, so long as the policies were aimed at achieving significant, broad-based reductions in poverty and also emphasized governance reforms, including increased transparency and accountability of government decision-making (Oksanen and Mersmann 2003:126).

Six years after their adoption by the World Bank and IMF, PRSPs are now in transition from the preparation stage to implementation. About 70 countries are expected to eventually prepare PRSPs (Levinsohn 2003:2); as of 2004, 53 PRSPs had been produced, including 39 full PRSPs and 14 preliminary versions (Bojö et al. 2004:5). Besides heavily indebted and aid-dependent countries, other countries have also chosen to prepare PRSPs, including many Central European countries as well as middle-income countries like Brazil (Driscoll and Evans 2004a:3).

PRSPs are becoming increasingly important in shaping the planning, policy, and budget priorities of developing countries, as well as in directing the aid flows from richer countries. The PRSP process is credited with focusing the attention of governments and donor agencies on poverty reduction as a central, priority concern rather than a special, marginal activity (Driscoll and Evans 2004b:3). In addition, PRSPs represent a more "upstream" approach to development aid, that is, an approach that redirects donor assistance from specific, discrete projects towards integrated support for sector-wide plans and even general budget support. Already, in eight African countries, up to one-fifth of aid flow is now for general budget support (Chiche and Hervio 2004 in Driscoll and Evans 2004b:5). PRSPs are also intended to draw increased attention to the non-income dimensions of poverty, such as empowerment of poor and marginalized communities, as well as addressing gender disparities (Levinsohn 2003:3).

How Is the PRSP Approach Faring?

PRSPs improve on the previous, structural adjustment approach of the World Bank and IMF in several important respects. For one, developing-country governments are the principal architects of their own development strategies. They are ostensibly free to decide for themselves how to use external aid flows, which in theory should increase national ownership of the plans and lessen the potential for problems caused by lack of country buy-in. PRSPs are also intended to be subject to continual revision and improvement over the years, serving as an umbrella for coordinating the efforts of various agencies in different economic and social sectors. In addition, the PRSP process was designed to promote increased transparency by governments and international agencies alike, as well as to feature meaningful involvement by civil society in the choice of development priorities (Reed 2004:8).

How well is the PRSP approach working in practice? The reviews are decidedly mixed. Assessments have been undertaken by many different actors, including the World Bank and IMF themselves. The consensus seems to be that PRSP processes have somewhat increased transparency, helped sharpen the focus on investments and institutions designed to reduce poverty, and provided greater opportunities for civil-society input and participation in some countries (Reed 2004:9). Some evidence indicates increased expenditures on health, education, and transport (as a percentage of GDP) in PRSP countries (OED 2004:30), and some assessments point to PRSPs as a catalyst for improvements in public financial management (World Bank and IMF 2003:28,32-33).

However, PRSPs have also been heavily criticized for shortcomings inherent in the PRSP approach as well as problems with how the process has actually unfolded in developing countries. Critics say that PRSPs have helped provide general budget support to poor countries without adequate commitments from these countries to specific poverty reduction outcomes, identification of the populations who will benefit from proposed anti-poverty programs, and provisions for monitoring and evaluation of expected outcomes (Reed 2004:9). Others note that, since PRSPs are prerequisites for debt relief and concessional lending, countries have strong incentives to tell donors what they think the donors want to hear rather than what the country is truly committed to doing to help reduce poverty (Tharakan and MacDonald 2004:7). In addition, the initial crop of PRSPs was not very clear about priorities or costs for anti-poverty measures (World Bank and IMF 2003:15,42).

"Mainstreaming" the Environment in PRSPs: The Unfulfilled Promise

Another important criticism of PRSPs has been their failure to adequately "mainstream" environmental issues, that is, to account for the role of resource access and environmental management in the lives of the poor, and their potential contribution to poverty reduction programs. Several studies have assessed the extent to which PRSPs integrate poverty-environment relationships—in general or in specific sectors, such as forestry, biodiversity, and water. In most of these assessments, the texts of PRSPs were analyzed and scores were assigned to indicate whether key issues were mentioned in the PRSP text and how fully these issues were analyzed or discussed.

- Within the Environment Department of the World Bank, a team of analysts has conducted several studies of environmental mainstreaming in PRSPs (Bojö and Reddy 2002, 2003a, 2003b; Bojö et al. 2004). Based on textual analysis of all available PRSPs, the authors found that the extent of environmental mainstreaming varies widely, with final versions of PRSPs tending to reflect better mainstreaming than initial (so-called interim) versions. They also concluded that issues related to the environmental health targets of the MDGs (safe drinking water and sanitation) receive more attention in PRSPs than do issues of natural resources management.

- A separate study of forest-related issues in 36 PRSPs (full and interim) found that treatment of forest issues was generally weak. Especially lacking was analysis of causal links between poverty and forest resources, as well as the role of natural resources and ecosystem services in determining human well-being. Given these shortcomings, the PRSPs analyzed included surprisingly many forest-related policies and programs in their agendas for action, most of which were apparently drawn from pre-existing national forest strategies and plans. For example, the PRSPs of Malawi and Mozambique were particularly strong in integrating forest-

sector activities based on national forest planning processes (Oksanen and Mersmann 2003:123,136-7). *(See Figure 2.)*

- Assessment of the mainstreaming of biodiversity-related themes in 15 PRSPs found that while declines in biodiversity were analyzed in 12 of the strategies, only one PRSP (Zambia) developed a policy prescription that integrated biodiversity conservation and poverty reduction. Most of the PRSPs analyzed called for efforts to diversify agricultural *species*, but only two PRSPs (Ethiopia and Mozambique) mentioned using different *varieties* of agricultural crops (Bindraban et al. 2004:19, 21). This is an important distinction, since using diverse varieties of the same crop species is a key strategy for reducing agricultural risk by improving disease resistance and enhancing tolerance of harsh environmental conditions.

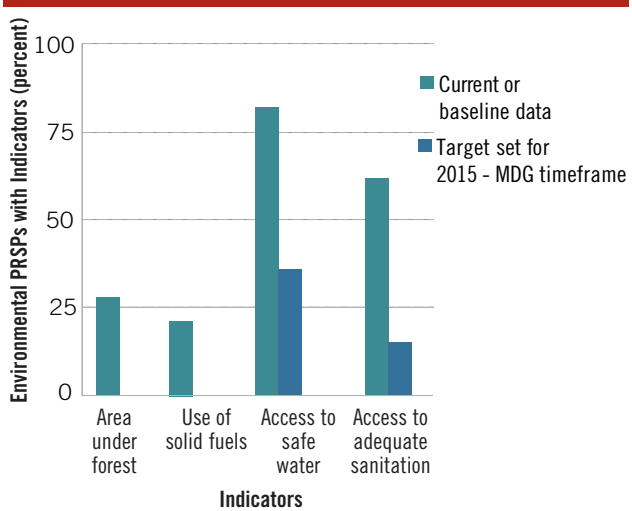
- A study of water issues in 10 PRSPs concluded that these issues were inadequately and inconsistently incorporated in PRSPs, especially with respect to integrating the need for close links between strategies for developing additional water-supply and sanitation infrastructure and strategies for managing water resources for productive uses by the poor, including agriculture, small-scale fishing, and small industry (Slaymaker and Newborne 2004:1-2).

Such weaknesses in integrating environmental issues into PRSPs seem to be more often a genuine oversight rather than the result of conscious priority-setting. In a study by the World Bank Environment Department, many PRSPs that scored low for attention to environmental issues were produced by countries where the poverty-environment linkage is strong—places with heavy dependence on natural resources for rural livelihoods, high levels of traditional fuel use, or low levels of access to safe water and sanitation (Bojö and Reddy 2003b:14).

This finding is supported by experiences from the field. For example, reports from Nigeria indicate that environmental concerns were barely mentioned in initial drafts of its "home-grown" version of the PRSP (known as the National Economic Empowerment and Development Strategy, or NEEDS), and efforts were made to incorporate environmental issues only after the draft was distributed to stakeholders, "more or less [as] an afterthought" (Oladipo 2004).

Most assessments concluded that the degree of environmental mainstreaming in PRSPs is strongly influenced by the nature of civil-society participation in their preparation. For

FIGURE 2 PRESENCE OF MDG-7 INDICATORS IN FULL PRSPs



A 2004 World Bank assessment of 39 full PRSPs found that, aside from access to safe water and adequate sanitation, most PRSPs did not make use of indicators for MILLENNIUM Development Goal 7 (Environmental Sustainability). Fewer still included targets for future progress.

Source: Bojö et al. 2004

example, the top-scoring cluster of PRSPs in the World Bank studies of environmental mainstreaming also scored high on public participation in PRSP development (Bojö et al. 2004:15).

Many studies also note that inclusion of environmental issues in PRSPs sometimes appears to be driven more by donor concerns rather than domestic political priorities. In several cases, donors have pressed reluctant governments to provide opportunities for significant engagement of civil society in PRSP processes. Indeed, closer relationships between civil society and donors has been an outgrowth of the evolution of PRSP processes in several countries (PRSP Monitoring and Synthesis Project 2002:5).

In the PRSPs of many countries, poverty diagnosis and analysis emphasize technical solutions to poverty-environment issues. Less frequently do PRSPs address more controversial, politically charged issues of access, ownership, control, and rights to environmental resources and how these impact the poor's capacity to derive environmental income from productive assets. However, in a few instances, participation by activist NGOs has begun to shape the content of poverty analysis in PRSPs; for example, the PRSPs of Uganda and Honduras have begun to address issues of access to and control of natural resources in response to concerns expressed in consultations with civil society (Waldman et al. 2005:32).

Another oversight in many PRSPs is the failure to assess the potential impacts of proposed growth policies on environmental sustainability, maintenance of critical ecosystem functioning, and key natural resources relied on by the poor for their livelihoods (Oksanen and Mersmann 2003:137). For example, PRSPs frequently propose incentives to encourage high-input, export-oriented agriculture to stimulate economic growth, yet rarely do they analyze the risks of this approach for harming small-scale rural farmers and weakening their ability to manage local natural resources (Tharakan and MacDonald 2004:25).

The PRSP of Nicaragua refers to intensive production of cash crops, including coffee, for export, but this discussion does not include measures to improve food security or to diversify rural incomes through nonfarm activities (Tharakan and MacDonald 2004:32). The PRSP of Sri Lanka presents goals for rapid economic growth through expansion of cash-crop agriculture, plantation activity, and fisheries, but provides no analysis of the implications of such growth on natural-resource depletion or waste generation (Tharakan and MacDonald 2004:38-9).

Several countries have begun to carry out their PRSPs and thus have been required to submit annual progress reports on PRSP implementation. In general, these annual reports give even less attention to environmental sustainability than the PRSPs themselves. In many cases, policies and programs proposed in a country's PRSP are absent entirely from discussions in its progress reports. Studies by the World Bank found that several countries whose PRSP was very highly rated for environmental mainstreaming submitted annual reports that reflected little progress in implementing environment-related measures (Bojö et al. 2004:19).

Upgrading the Treatment of Environmental Income in PRSPs

PRSPs have become one of the most powerful vehicles for carrying forward a commitment to better ecosystem management that benefits the poor. However, the processes and content of PRSPs in many countries falls far short of the potential. Even among strategies recognized within the development community for a relatively high degree of environmental mainstreaming, PRSPs rarely go far enough in proposing measures that would empower the poor with equitable and sustainable opportunities to derive income from their environmental assets.

ASSESSING ENVIRONMENTAL INCOME OPPORTUNITIES IN PRSPs

To assess the treatment of environmental income opportunities for the poor, *WRR 2005* examined 20 PRSPs that have been touted by the World Bank, the United Nations, and other development experts as the best examples to date of environmental mainstreaming. We found several examples of proposed policies and programs that, if effectively implemented, would genuinely improve the prospects for the poor to derive sustainable income from their environmental assets. Many of these examples are described in the text of this chapter.

Of course, whether these "paper promises" can or will be translated into progress on the ground is the crux of the matter. Our desk study suggests that PRSPs with the most extensive and successful mainstreaming of environment and environmental income opportunities were also the most impeccably presented documents, in some cases perhaps indicating that international consultants, provided through assistance from the donor community, had a large hand in their preparation. The strength of the political will behind these environmental proposals remains to be seen.

What can be done to ensure that PRSPs advance a pro-poor agenda for maximizing sustainable environmental income while maintaining the integrity of critical ecosystem functions? At least seven key issues need to be examined. *(See Framework for Upgrading PRSPs.)* In the discussion below, examples of good practice in crafting PRSPs are highlighted to show that adequate treatment of these issues in PRSPs is both possible and desirable.

1. Ecosystem Orientation and Importance of Environmental Income

PRSPs need to do a better job of recognizing the importance of environmental income and the role it can play in reducing poverty. The approach taken in PRSPs to enhancing rural livelihoods should be based on an awareness of the importance of ecosystems as the ultimate basis for all economic activity and a key contributor to human welfare, and should seek to ensure the long-term sustainability of ecosystem services and the livelihoods derived from them.

FRAMEWORK FOR UPGRADING PRSPs

How should poverty reduction strategies be evaluated for their treatment of environmental income opportunities for the poor? The following questions can shed light on whether PRSPs adequately reflect the importance of environmental income and provide for sustainable and equitable ecosystem management.

ENVIRONMENTAL MAINSTREAMING

1. **Ecosystem orientation and environmental income.** Does the strategy recognize the importance of ecosystems as a source of income for the poor? Does it advocate an ecosystem approach to maintain and enhance this income source?

2. **Sustainability of income over time.** Does the strategy take a long-term approach to natural resource income, stressing sustainable ecosystem management? Does it integrate with existing national sustainability plans?

ENVIRONMENTAL GOVERNANCE

3. **Tenure and access to resources.** Does the strategy address issues of resource access of the poor and recognize their centrality to increasing income security? In particular, does it squarely confront the issue of tenure insecurity and advocate for pro-poor tenure reform?

4. **Decentralization and CBNRM.** Does the strategy address the devolution of power over resource management to competent local authorities, and does it make provision for building the governance capacity and transparency of these local institutions? Does the strategy support community-based natural resource management as an effective form of local empowerment and advocate for its clear recognition in law?

5. **Participation, procedural rights, and gender equality.** Is the strategy grounded in broad-based participation by civil society? Are the priorities identified in the consultation process incorporated into the final strategy? Does the strategy emphasize free and informed consent of communities to economic development activities that entail local environmental impacts? Does the strategy acknowledge and address gender issues?

ENVIRONMENTAL MONITORING AND ASSESSMENT

6. **Environmental monitoring.** Does the strategy include plans for monitoring environmental conditions to track the impacts of economic growth on environmental income and provide the basis for sound ecosystem management?

7. **Targets, indicators, and assessments.** Does the strategy contain quantifiable targets for improving outcomes with respect to the environmental income opportunities of the poor? Does it specify poverty and environmental indicators and how these will be used to shape pro-poor growth strategies? Does it describe plans for assessments to evaluate performance in implementing environment- and governance-related measures to improve the environmental income opportunities of the poor.

One of the strongest PRSPs in terms of recognizing the potential of environmental income for poverty reduction is that of Cambodia. The Cambodian PRSP identifies land, water, agriculture, forests, and fisheries as key to increasing rural incomes and sets out an 11-point program to improve rural livelihoods by increasing income from the development of small-scale aquaculture, establishing and strengthening community forestry, promoting sustainable, community-based management of fishery resources, and improving market access for small-scale farmers and rural producers (Cambodia 2002:v, 53, 61).

Similarly, Bolivia highlights the potential contribution of biodiversity to rural incomes and the economy as a whole. It cites preliminary studies indicating that within 15 years biodiversity-related activities (such as ecotourism, mitigation of climate change, and services related to biotechnology) could increase GDP about 10 percent (Bolivia 2001:133). Biodiversity resources could provide near-term gains to disadvantaged rural populations from projects featuring sustainable use of wild animal species, including vicuna, lizard, and peccary (Bolivia 2001:133). Bolivia also proposes to formally establish non-timber forest activities (e.g., gathering of brazil nuts and cultivation of palms) within the national forest system and municipal forest reserve areas, with the aim of creating new income generation activities for impoverished local communities (Bolivia 2001:134).

However, even among PRSPs that devote significant attention to opportunities for enhancing the poor's environmental income, few refer to the importance of ecosystems as fundamental units for managing natural resources and ensuring long-term environmental sustainability. Of the PRSPs reviewed, only Ghana mentioned the "ecosystem approach" by name and then only in the limited sense of using this approach to restore threatened habitats and ecosystems (Ghana 2003:75).

One exception is Cambodia, which has made some limited efforts to incorporate an ecosystems-based perspective or approach within specific sectors and activities. For instance, the Cambodian PRSP describes a national vision for water resources that explicitly encompasses healthy aquatic ecosystems as well as productive fisheries and provision of safe and affordable drinking water (Cambodia 2002:64). Cambodia also applies the concept of agroecosystems in agricultural development plans, including proposals to set up agricultural research centers in each of the country's principal agroecosystems that would be oriented to small-scale farmers. These centers would conduct research and extension, emphasizing intensification of agricultural production through improved water, soil, and nutrient management, with relatively few external inputs in the form of agrichemicals or improved seeds (Cambodia 2002:56).

2. Sustainability of Income Over Time

A concentration on environmental income is not by itself sufficient if this income stream is not sustainable. Nations thus need to take care that the strategies they promote in their

PRSPs for exploiting natural resources are viable over the long term. PRSPs frequently include expansions of the agriculture, forestry, or fisheries sectors, but rarely look at the implications of these activities for the future health of the resource. For example, of the 20 PRSPs reviewed, several targeted transformation of subsistence agriculture as a key means of reducing rural poverty. In many cases, however, plans for agricultural intensification, modernization, and commercialization did not explicitly address how this transformation could be achieved in ways that would ensure long-term sustainability of agricultural income and protection of the agricultural resource base. Likewise, few PRSPs described detailed plans to generate additional income and employment from forests and fisheries that were explicitly based on improved, sustainable management of these natural resources.

PRSPs might do a better job of incorporating the concepts of sustainability if they were more closely linked to existing environmental planning processes such as a national strategy for sustainability, or a national plan to meet the terms of the Convention on Biological Diversity. For instance, Nicaragua's PRSP highlights its National Strategy for Sustainable Development, which focuses on the implementation of policies and public investments to ensure more rational use of the country's natural resources. The strategy contains elements addressing several economic sectors and activities, including the Environmental Policy and Action Plan, the Forestry and Development Law, the Fisheries Law, and the Biodiversity Law (Nicaragua 2001:22, 25).

Sri Lanka's PRSP refers to the various environmental strategies and plans it has developed, including a national environmental action plan and a national strategy for sustainable development, as well as planning under international environmental agreements on biodiversity, climate change, and desertification (Sri Lanka 2002:97, 129). The PRSP also mentions revision of other environmental plans, including the national Rain Forest Law, coastal zone management plan, and regional plans for integrated forestry resource management (Sri Lanka 2002:19, 90).

3. Tenure and Access to Resources

Security of tenure, access, and user rights are central to achieving sustainable livelihoods for the rural poor, particularly in providing them with appropriate incentives to manage environmental assets for long-term productivity and income growth. Most PRSPs mention tenure and access to land and other productive resources; however, some treat the subject in only a cursory manner, while others present detailed discussions of tenure-related problems or plans for reform.

PRSPs should clearly identify the role of property and user rights as important factors shaping investments in agricultural productivity and the prospects for expanding rural incomes. More importantly, PRSPs must then indicate how they plan to deal with the nation's particular tenure challenges.

Zambia's PRSP points out that nearly 97 percent of Zambian farmers have no title to the land they cultivate, reducing incentives to invest in land improvements and agriculture-related infrastructure, preventing farmers from having access to credit, and depressing land productivity within a system where smallholders contribute about 60 percent of agricultural output (Zambia 2002:44). The PRSP also links the lack of secure title to disincentives for development of infrastructure for expanded tourism and eco-tourism opportunities (Zambia 2002:67). However, Zambia acknowledges that it has made little progress to date in setting up a land administration system, titling communally owned or state lands, or developing a market for land. The proposed remedy—a review of existing land law and tenure arrangements as well as discussions with traditional communities regarding incentives to open unused land for investment—may be realistic given political and budgetary constraints, but seems unlikely to bring about substantial progress in the foreseeable future (Zambia 2002:58).

On the other hand, Sri Lanka's PRSP presents detailed proposals for far-reaching land reform to provide the poor with greater access to land. The government plans to test a new land

titling program, designed to be fairer and more efficient, which is expected to reduce the cost of titling a parcel of land from US$110 to under $40. Proposed legal reforms would consolidate 25 different laws that directly affect land titling, and alternative dispute mechanisms will be used to resolve issues that prevent titling. Advanced information technologies, including digital mapping and integrated data management, will be used to accelerate land titling and registration and make the land-management system more transparent and accessible (Sri Lanka 2002:62).

Honduras outlines very specific actions, with associated budgets and deadlines, that will be carried out to improve equity and security in the poor's access to land. Key elements include completing a nationwide *cadastre* (survey) of forest and agricultural lands to strengthen the legal basis for land ownership, modernizing the rural property registry to provide a modern tool for guaranteeing the accuracy of land tenure arrangements and land transactions, and an expanded program for titling rural properties for small farmers, ethnic groups, and independent *campesinos* (Honduras 2001:70).

Bolivia plans to regularize the titles to all rural land by 2006, including measures to simplify the procedures for registering land titles and property rights by merging the systems for physical and legal registration of property (Bolivia 2001:110).

4. Decentralization and Community-Based Natural Resource Management

Almost all PRSPs refer to decentralization and its importance for improving governance and reducing poverty. Often the discussion is rather general, however, and mentions only one or two sectors—usually education and health. PRSPs should incorporate analysis of important aspects of decentralization issues that are directly related to natural resources management and opportunities to enhance environmental income for the poor.

Among the current crop of PRSPs, a few contain well-developed discussions of decentralization for the management of environmental resources. A few also outline ways in which the government proposes to work with local people to increase rural income through community-based management of forests, fisheries, and other environmental assets.

Bolivia's PRSP explicitly addresses the implications of decentralization for environmental management. The strategy refers to institution-strengthening initiatives aimed at ensuring that municipal governments will have the capacity to carry out new responsibilities to implement environmental policies and standards. It also highlights the ongoing role of Bolivia's central government in important environment-related planning functions, including the development of diagnostic assessments,

resource inventories, and soil and water-use plans, that will influence environmental investments (Bolivia 2001:131-2). Some innovative mechanisms are proposed for financing the environmental activities of local governments, including sharing revenues from a special hydrocarbon tax (Bolivia 2001:149).

Zambia designates development of a decentralization policy a matter of top priority to ensure citizen participation in their own affairs (Zambia 2002:35). The PRSP outlines decentralization measures that will enable communities to benefit from the commercial use of their lands, including shareholding arrangements with investors and tax-sharing arrangements (Zambia 2002:51).

Concerning community-based natural resource management, PRSPs should spell out in detail how the government proposes to work with local people to increase rural incomes through community-based management of forests, fisheries, and other environmental assets. For example, Cambodia notes that it is transitioning from state control to co-management of fisheries with local communities. In response to rising incidence of conflict between commercial fishing operators and subsistence and small-scale family fishers, Cambodia is releasing more than half of the country's fishing lots to local fishing communities. The PRSP notes that this change will empower local people to participate in conservation and management of the fishery resource, giving them an incentive to refrain from illegal fishing practices that have been degrading the aquatic environment (Cambodia 2002:59).

Also outlined in Cambodia's PRSP are initiatives related to community forestry to enhance local community participation in decision-making for forest management. In consultation with local user groups, the government will review the system of fees and permits on NTFPs and work toward removing barriers to marketing NTFPs, especially resin, that can be harvested without damaging the forest (Cambodia 2002:60).

Sri Lanka details several initiatives for community-driven development through sustainable management of natural resources. Community-based reef management projects will be undertaken as part of a 5-year public investment program to minimize coastal erosion, already affecting an estimated 55 percent of the Sri Lankan coast prior to the December 2004 tsunami. Community organizations will prepare coastal management plans, undertake reef stabilization and habitat conservation, implement measures to improve water exchange in affected lagoons, and help develop community fish hatcheries (Sri Lanka 2002:64, 89-90).

The PRSP also highlights plans to involve poor communities in decision-making for protected forests, providing funding to communities to replant degraded forest areas, manage buffer zones, and develop timber farms using conservation-oriented cultivation practices, with a goal of halving the rate of deforestation due to encroachment and illegal forest use (Sri Lanka 2002:90–91). The poor will be encouraged to participate in the development of Sri Lanka's ecotourism industry by forming community-based organizations in the buffer zones adjacent to national parks and wildlife sanctuaries, which will receive a share of ecotourism earnings and training to assist in wildlife conservation activities (Sri Lanka 2002:91).

Kenya also plans to promote pro-poor tourism by fostering community-based ecotourism in the northern and western areas of the country. The PRSP outlines efforts to strengthen community involvement in wildlife conservation, implement measures to reduce human-wildlife conflict, provide small and medium enterprises with access to credit, review the structure of park tariffs to expand tourism in less-visited parks, and establish certification schemes for environmentally friendly resorts (Kenya 2004:49).

5. Participation, Procedural Rights, and Gender Equality

Guidelines for preparing PRSPs require that these strategies be prepared with extensive input from a broad range of stakeholders and that countries provide detailed explanations of processes used to secure such participation. Evidence to date indicates that PRSP mechanisms to promote participation often emphasize stakeholders that are urban-based, with relatively sophisticated analytical capabilities, and exclude organizations representing largely rural constituents, especially indigenous peoples.

Governments have sometimes barred stakeholders critical of their policies from participating in PRSP consultations (Waldman et al. 2005). Moreover, governments, NGOs, and international donors often have very different ideas of what constitutes "participation." Some governments have sought to limit participation merely to dissemination of information to NGOs and other stakeholders, rather than substantive input. NGOs and some donors have pressed for more authentically democratic exercises in which civil society has opportunities to shape the agenda and contribute meaningfully to the design of PRSPs (PRSP Monitoring and Synthesis Project 2002:2-6). The PRSPs reviewed here varied considerably with respect to the efforts made to involve environmental stakeholders and to incorporate input from civil society.

One of the stronger efforts was that of Cambodia, which devotes an entire chapter of its PRSP to describing its participatory processes, including four national workshops. The chapter also describes consultations held by sector and line ministries, provincial consultations, a forum on monitoring and evaluation aspects, an NGO forum, meetings with the private sector, donor involvement, meetings with parliamentarians, and consultations with trade unions. It also acknowledges the need for ongoing consultations as it prepares subsequent versions of the plan (Cambodia 2002:8-12, 164).

Ghana presents an appendix that lists specific comments offered on various drafts of the PRSP and indicates how these comments were addressed. For instance, environment-related issues that were addressed in response to outside input include:

the need for greater mainstreaming of environment in the PRSP, the imperative to improve natural resources management as a prerequisite to sustainable production, the role of tenure insecurity as a cause of poverty, the importance of small-scale irrigation and access to land to support farmers, and the need to develop alternative sources of energy (Ghana 2003:216-225).

In Rwanda and Vietnam, dissemination of key documents in local languages helped improve awareness of the PRSP process (Bojö and Reddy 2003b:26).

Addressing disparities in women's rights and access to land and other productive assets has been shown to be a fundamental aspect of effective poverty reduction strategies. A few of the PRSPs reviewed presented detailed analysis of the impacts of gender on environmental income opportunities as well as detailed proposals for remedying gender-based inequities in countries where women traditionally have not been accorded equal rights and access to ecosystems.

Cambodia notes that, with women accounting for 65 percent of agricultural labor and 75 percent of fisheries production, poverty reduction cannot succeed unless it addresses the roles and needs of women (Cambodia 2002:127). The PRSP sets an explicit goal of ensuring that women and girls receive full legal protection and education about their legal rights to access to land and natural resources. Equal numbers of women and men are to be included in all consultative processes and on all monitoring and evaluation teams (Cambodia 2002:vii). Cambodia sets a goal of ensuring that women, the primary collectors and users of water, ultimately make up half of all members of water-user associations, and at least 20 percent of such members within three years (Cambodia 2002:113, 128). The government also pledges to address gender disparities through budget allocations as well as policies and programs (Cambodia 2002:136).

Sri Lanka highlights plans for legal reforms to ensure women's equal rights to inherit land and proposes to encourage women's self-employment in small-scale fishing through training and extension activities (Sri Lanka 2002:200,213).

Zambia proposes to mainstream gender in its land policies, including the introduction of legal reforms to provide equal land rights for women and ensure women's access to natural resources. Women's traditional knowledge of sustainable resource use and management will be integrated into the development of environmental management and extension programs, and 30 percent of all land allocations will be reserved for women applicants (Zambia 2002:54, 114).

6. and 7. Environmental Monitoring, Targets, Indicators, and Assessments

PRSPs are notoriously weak in their provisions for monitoring and evaluating the impacts of the policies and programs they propose. In many cases, provisions for monitoring and evaluating environment-related impacts are particularly inadequate. The World Bank's review of environmental mainstreaming in PRSPs found that few were structured for effective monitoring of progress towards proposed outcomes; that is, few contained realistic, quantified, time-bound, costed targets coupled with a sufficient suite of specific, relevant, quantitative indicators for measuring progress towards these targets (Bojö and Reddy 2003b:25).

Among the PRSPs reviewed, a few clearly identified targets and indicators that will be used to gauge the impact of proposed interventions related to environment and natural resources management. Bolivia presents several targets and indicators related to enhancing environmental income for the poor, including increases in the extent of land brought under secure title. The PRSP proposes to complete the process of securing clear title to rural property in Bolivia by 2006, which would involve regularizing the ownership of more than 7 million ha per year from 2001 to 2006 (Bolivia 2001:183). Other indicators established by Bolivia include annual increases in resources allocated to local communities from the revenues of protected areas, as well as increases in income from sustainable wildlife management programs (Bolivia 2001:186).

Cambodia's PRSP presents an action-plan matrix with numerous strategic objectives, actionable measures, estimated costs, targets and indicators, and the responsible implementing agency. Among the targets and indicators related to environmental income opportunities are increases in the number of land titles issued (including the number of titles held by women) and establishing specific numbers of community forest, fisheries, and small-scale aquaculture projects in various provinces. Quantitative goals are also set for the numbers of women receiving agricultural training on such topics as soil fertility and management, prevention of soil degradation, and safe pesticide use, as well as the percentage of women members in farmers associations (Cambodia 2002:172-80, 229).

Steps toward More Effective PRSPs

One emerging area of debate surrounding PRSPs is whether these strategies will enable countries to successfully meet the MDGs. The UN suggests that existing PRSPs often are not adequate for this purpose and has called for so-called "MDG-based poverty reduction strategies" that are more ambitious, scaled-up, and focused on a longer planning horizon, laying out a path to achievement of the MDGs by 2015. A pivotal step in ramping up PRSPs will be identifying additional sources of capital, since lack of existing capital to finance needed national investments is one of the reasons that interventions described in current PRSPs generally are not ambitious enough to meet the MDGs.

Increased capital to spark poverty-reducing growth could come from various sources, including mobilizing developing countries' own domestic sources of natural wealth as well as expanded development aid and private sector-led trade and investment. Key challenges will be to understand the strategic

and policy elements necessary to scale up investment to meet the MDGs and to strike a thoughtful balance between ambition and realism in PRSPs.

To this end, stakeholders could take several important steps toward PRSPs that emphasize scaled-up investment for pro-poor growth while also protecting the ability of ecosystems to provide sustainable services that underlie human well-being and the livelihoods of the poor.

- The World Bank and IMF can support efforts to achieve the MDGs by adapting macroeconomic frameworks for PRSPs according to specific country circumstances. For example, the Bank can encourage countries to work with the poor to invest in ecosystem services such as water resources, soil conservation, and forests and woodlands that generate needed provisioning services such as food, fiber, and fuel. These investments, as shown by the Millennium Ecosystem Assessment, also provide regulating services such as water regulation, erosion control, pest control, and natural-hazard regulation which reduce vulnerability of the poor to damaging effects of drought, floods, loss of soil productivity, and crop failures.

- The United Nations can provide support to developing countries to help them strategically link Poverty Reduction Strategies to efforts to meet the MDGs. This assistance can take several forms, including building national capacities to develop and implement scaled-up investment programs and encouraging the exchange of experiences and lessons learned between countries.

- Developing countries can contribute to the process by ensuring that their PRSP-related efforts emphasize transparency and inclusion and by being accountable for measurable progress in reducing poverty. To this end, monitoring and assessment of poverty and environment outcomes using appropriate data and benchmarks is essential.

- Donor countries can help by ramping up the levels of assistance provided to developing countries to help them reach the MDGs. Development aid needs to be delivered in a stable and predictable manner to facilitate effective planning as well as to avoid destabilizing macroeconomic impacts. Donors should complement development assistance with rapid and significant debt relief to create fiscal "space" for pro-poor, MDG-based investments.