Environment for the MDGs

MAINSTREAMING POVERTY-ENVIRONMENT LINKAGES INTO DEVELOPMENT PLANNING: A Handbook for Practitioners

UNEP

UNDP-UNEP Poverty-Environment Initiative

UNDP

The Poverty-Environment Initiative (PEI) of the United Nations Development Programme (UNDP) and the United Nations Environment Programme (UNEP) is a global UN-led programme that supports country-led efforts to mainstream poverty-environment linkages into national development planning. The PEI provides financial and technical assistance to government partners to set up institutional and capacity strengthening programmes and carry out activities to address the particular poverty-environment context.

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Table of Contents

Boxes

Figures

Tables

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Foreword

The world has been talking about sustainable development and poverty alleviation for a long time. More than two decades have passed since the 1987 Brundtland Report first laid out a vision of sustainable development to be achieved, in part, by integrating environmental management into economic planning and decision-making. Given the likely impacts of climate change on the world's poorest and most vulnerable, and the unprecedented strains on the world's ecosystems and their ability to sustain a rising standard of living for billions of human inhabitants, the need to accelerate efforts to integrate environment into poverty reduction efforts has never been greater.

Experience continues to show the vital contribution better environmental management can make to improving health, well-being and livelihood opportunities, especially for the poor. To create the kind of world we want, to fight poverty, to promote security and to preserve the ecosystems that poor people rely on for their livelihoods, pro-poor economic growth and environmental sustainability must be placed unequivocally at the heart of our most fundamental policies, systems and institutions.

One way to do this is through the process that has come to be known as **poverty-environment mainstreaming**. This essentially aims to integrate the linkages between the environment and poverty reduction into government processes and institutions, thereby changing the very nature of its decision-making culture and practices. Typically, such mainstreaming must occur within a nation's development or poverty reduction strategy and the way it approaches aspects of economic decision-making. In this way, we can put the twin imperatives of pro-poor economic growth and environmental sustainability at the core of everything we do.

This handbook is designed to serve as a guide for champions and practitioners engaged in the painstaking task of mainstreaming poverty-environment linkages into national development planning. It draws on a substantial body of experience at the country level and the many lessons learned by the United Nations Development Programme and the United Nations Environment Programme in working with governments—especially ministries of planning, finance and environment—to support efforts to integrate the complex interrelationships between poverty reduction and improved environmental management into national planning and decision-making. The handbook also benefits from the knowledge and experience of other development actors, in particular the Poverty Environment Partnership.

Our hope is that practitioners of poverty-environment mainstreaming—either those who have already embarked on the journey or those who are just beginning to think about the challenge ahead—will find this a helpful guide. We intend for it to be not just a repository of information and assistance, but also and especially a source of encouragement and inspiration in carrying out a mission that is sometimes daunting, occasionally frustrating, but of critical importance for the future well-being of the world's poor and most vulnerable.

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Chapter 1

About the Handbook

Poor households rely disproportionately on natural resources and the environment for their livelihoods and income. The poor are more vulnerable to natural disasters such as droughts and floods and to the ongoing impacts of climate change. On a broader scale, natural resources such as forests and fisheries play a larger role in the national income and wealth of less developed economies.

Thus, a healthy and productive environment contributes significantly to human well-being and pro-poor economic development. Intact, functioning ecosystems provide services—such as the provision of food, water, fuel and fibre, as well as regulation of climate—on which nations and people rely to earn income from agriculture, fishing, forestry, tourism and other activities. Sustainable use of these ecosystem services and natural resource assets is increasingly recognized as a key factor in enduring economic development and improvement in human welfare, and as a necessary condition for achieving the Millennium Development Goals (MDGs). These and other poverty-environment linkages are explored in greater detail in chapter 2.

1.1 Purpose

The purpose of this handbook is to provide practical, step-by-step guidance on how governments and other national actors can mainstream poverty-environment linkages into national development planning. We here define poverty-environment mainstreaming as the **iterative process of integrating poverty-environment linkages into policymaking, budgeting and implementation processes at national, sector and subnational levels. It is a multi-year, multi-stakeholder effort** grounded in the contribution of the environment to human well-being, pro-poor economic growth and achievement of the MDGs. It entails working with a range of government and non-governmental actors, and other actors in the development field.

The handbook lays out a programmatic approach to mainstreaming poverty-environment linkages into development planning that has been developed by the Poverty-Environment Initiative (PEI), a joint effort of the United Nations Development Programme (UNDP) and the United Nations Environment Programme (UNEP) that provides financial and technical support to countries for poverty-environment mainstreaming. The approach is largely based on the PEI experience in helping governments around the world mainstream poverty-environment linkages, primarily in Africa and Asia and the Pacific, as well as selected experiences from other development actors, particularly members of the Poverty Environment Partnership. The approach aims to provide a **flexible model that can be adapted to national circumstances to guide the choice of activities, tactics, methodologies and tools to address a particular country situation**. It comprises the following components:

- Finding the entry points and making the case
- Mainstreaming poverty-environment linkages into policy processes
- Meeting the implementation challenge

Stakeholder engagement occurs throughout, from inception through policy development, implementation and monitoring. Each successive component builds on previous work, but the chronology is not fixed. Rather, mainstreaming poverty-environment linkages is an iterative process in which activities may take place in parallel or in an order different from that presented here, according to a country's particular priorities and needs.

1.2 Target Audience

The target audience for the handbook consists primarily of champions of the mainstreaming process and practitioners at the country level.

- **Champions** are practitioners who take on the role of advocating the integration of poverty-environment considerations into development planning at national, sector and subnational levels. These include high-level decision-makers and government officials who serve as ambassadors for poverty-environment mainstreaming.
- **Practitioners** include stakeholders from the government (head of state's office, environment, finance and planning bodies, sector and subnational bodies, political parties and parliament, national statistics office and judicial system), non-governmental actors (civil society, academia, business and industry, the general public and local communities, and the media) and development actors in the environment, development and poverty reduction fields.

A secondary audience consists of officials at United Nations agencies, including United Nations resident coordinators and country teams that engage with governments on national development priorities. Their work often involves mainstreaming poverty-environment linkages, and this handbook aims to guide and inform these efforts.

1.3 Structure

The handbook is divided into several chapters, as outlined below. The chapters can be read individually, according to user interests and needs, referring to other sections of the handbook as required. Key messages are highlighted throughout the text, and numerous examples are presented.

Chapter 2 describes key concepts related to mainstreaming poverty-environment linkages, including the contribution of the environment to human well-being, pro-poor economic growth and achievement of the MDGs.

Chapter 3 presents a detailed overview of the mainstreaming approach, describing the various activities involved in each of its three components. It highlights the role of stakeholders and the development community, including experiences and initiatives from UNDP and UNEP.

Chapters 4 through 6 detail the three components of the programmatic approach. Each chapter presents step-by-step guidance, provides references and illustrative cases and concludes with expected achievements and examples.

Chapter 4 provides guidance for preparing a mainstreaming effort, which involves finding the entry points into national development planning and making the case to decision-makers for poverty-environment mainstreaming. It explains how to carry out relevant activities, including initial assessments of the nature of poverty-environment linkages; understanding the country's governmental, institutional and political contexts; raising awareness and building partnerships within and beyond the government; assessing institutional and capacity needs; and developing working arrangements for a sustained effort in poverty-environment mainstreaming.

Chapter 5 describes how to integrate poverty-environment linkages into a policy process. It includes guidance on how to collect country-specific evidence using such techniques as integrated ecosystem assessments and economic analyses. It also provides information on how to use this evidence to influence policy processes and to develop and cost policy measures.

Chapter 6 offers guidance on meeting the implementation challenge. It discusses how to integrate poverty-environment linkages in national monitoring systems; how to engage with budgeting processes and ensure that policy measures are funded; how to support policy measures at national, sector and subnational levels; and how to strengthen institutions and capacities to sustain the effort.

Chapter 7 concludes and puts forth some proposals for UNDP-UNEP and its partners for future work in the area of poverty-environment mainstreaming.

The handbook also contains a list of abbreviations and acronyms, a glossary and a references section.

Chapter 2

Understanding Poverty-Environment Mainstreaming

Coverage

- Defines poverty-environment mainstreaming (section 2.1)
- Explains why mainstreaming poverty-environment linkages is significant for human well-being, pro-poor economic growth and achievement of the MDGs (section 2.2)
- Highlights the contribution of natural capital to the wealth of low-income countries (section 2.3) and the importance of climate change for poverty-environment mainstreaming (section 2.4)

Key Messages

- Poverty-environment mainstreaming is an iterative multi-year, multi-stakeholder process
- The environment contributes significantly to human well-being, pro-poor economic growth and achievement of the MDGs
- Natural capital represents a relatively larger share of the wealth of low-income countries
- Climate change adaptation is an integral part of poverty-environment mainstreaming

2.1 Defining Poverty-Environment Mainstreaming

Sustainable development depends in large measure on successfully integrating the environment into economic planning and decision-making, a process known as **environmental mainstreaming**. Early efforts in the 1990s to mainstream the environment into national planning—for example, through poverty reduction strategy papers (PRSPs)—aimed to ensure that economic decisions and plans took environmental priorities into account and addressed the impact of human activities on environmental services and assets.

Evidence suggests that these initial attempts to mainstream the environment into national planning had mixed success. A series of influential reviews by the World Bank showed that most of the PRSPs adopted by the world's poorest countries in the 1990s did not sufficiently address the environment's contribution to poverty reduction and economic growth (Bojö and Reddy 2003; Bojö et al. 2004).

Country governments and development actors responded by devoting greater attention to integrating the environment into PRSPs, with particular attention to **mainstreaming poverty-environment linkages** and making the case for addressing the contribution of the environment to human well-being, pro-poor economic growth and achievement of the MDGs to the ministries responsible for national development planning.

Definition: Poverty-Environment Mainstreaming

The iterative process of integrating poverty-environment linkages into policymaking, budgeting and implementation processes at national, sector and subnational levels. It is a multi-year, multi-stakeholder effort that entails working with government actors (head of state's office, environment, finance and planning bodies, sector and subnational bodies, political parties and parliament, national statistics office and judicial system), non-governmental actors (civil society, academia, business and industry, general public and communities, and the media) and development actors.

While environmental mainstreaming and poverty-environment mainstreaming may overlap under certain circumstances, attention has focused in recent years on the key goal of reducing poverty and the pivotal contribution that better environmental management can make to improved livelihoods and income opportunities of the poor and other vulnerable groups, including women and marginalized populations.

These efforts have taken on particular urgency as development assistance increasingly takes the form of general budget and sector support, with less financial aid earmarked for specific environmental projects. The need has never been greater to demonstrate to financial and planning bodies the value of allocating scarce resources to improve environmental management as a key strategy to benefit the poor and reduce poverty.

2.2 Exploring Poverty-Environment Linkages

The well-being of poor people can be greatly improved through better management of the environment. Below are some concepts that help elucidate the nature of poverty-environment linkages by demonstrating the contribution of the environment to human well-being, pro-poor economic growth and achievement of the MDGs.

Box 2.1 presents selected facts and figures on poverty-environment linkages. Additional examples are provided throughout the handbook (see especially chapters 4 and 5). The breadth and diversity of these examples underscore the important contribution the environment makes to human well-being and poverty reduction.

Box 2.1 Facts and Figures Exemplifying Poverty-Environment Linkages

- In **Bangladesh**, more than 95 per cent of the population rely on solid fuels, such as charcoal and firewood, for their energy needs.
- In **Bolivia**, over 80 per cent of the people living in rural areas are poor, making them particularly vulnerable to the environment on which their livelihoods rely.
- In **Burkina Faso**, 92 per cent of the active workforce are employed in agriculture and fisheries, and hence depend for their well-being on the sustainable management of these resources.
- In **Latin America and South-East Asia**, 100 per cent of the poor living on less than $1 per day are exposed to indoor air pollution.
- In central **Viet Nam**, following disastrous floods in November 1999, poor households were the slowest to recover and were unable to afford labour to clear their fields and return to agricultural production.

Source: UNDP et al. 2005.

The Contribution of the Environment to Livelihoods, Resilience, Health and Economic Development

Poverty-environment linkages can be conceptualized in many ways, notably in terms of their relationship to livelihoods, resilience to environmental risks, health and economic development.

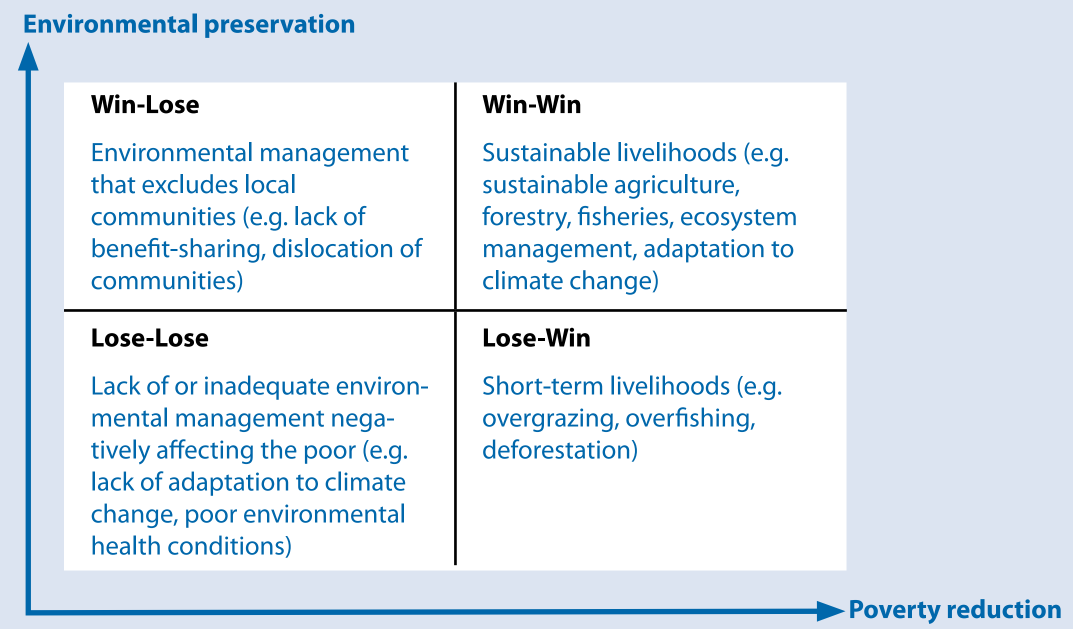
- **Livelihoods.** Ecosystems provide services (including provisioning services such as food and freshwater, regulating services such as the regulation of climate and water and air quality, cultural services such as recreation and aesthetic enjoyment, and supporting services needed to produce all other ecosystem services such as soil formation) on which poor people rely disproportionately for their well-being and basic needs. Populations also depend on the environment to earn incomes in sectors such as agriculture, fishing, forestry and tourism, through both formal and informal markets. Livelihoods can be sustainable or not, depending on the way the environment is managed.
- **Resilience to environmental risks.** Poor people are more vulnerable to natural disasters such as floods and droughts, the effects of climate change and other environmental shocks that threaten their livelihoods and undermine food security. Improving the ways in which environmental resources, such as forests, are managed increases the resilience of poor people and their livelihoods to environmental risks.

- **Health.** Environmental conditions account for a significant portion of health risks to poor people. Environmental risk factors, such as occupational exposures to chemicals and indoor air pollution from household solid fuel use, play a role in more than 80 per cent of the diseases regularly reported on by the World Health Organization. Globally, nearly a quarter of all deaths and of the world's total disease burden can be attributed to the environment. As many as 13 million deaths could be prevented every year by making the environment healthier (Prüss-Üstün and Corvalan 2006). Improved health from better environmental conditions would also contribute to improvements in livelihoods, economic development and resilience to environmental risks.
- **Economic development.** Environmental quality contributes directly and indirectly to economic development and employment. These contributions are particularly important in developing countries in such sectors as agriculture, energy, forestry, fisheries and tourism.

Poverty-environment linkages are dynamic and context specific, reflecting geographic location, scale and the economic, social and cultural characteristics of individuals, households and social groups. In particular, the sex and age of the head of household (male or female, adult or young person) are key factors influencing poverty-environment linkages.

Poverty-environment linkages can be positive or negative, creating virtuous or vicious circles for environmental preservation and poverty reduction (figure 2.1). While trade-offs may be necessary, poverty-environment mainstreaming aims at achieving the best balance between environmental preservation and poverty reduction for the benefit of the poor and long-term environmental sustainability.

Figure 2.1 Examples of Positive and Negative Poverty-Environment Linkages

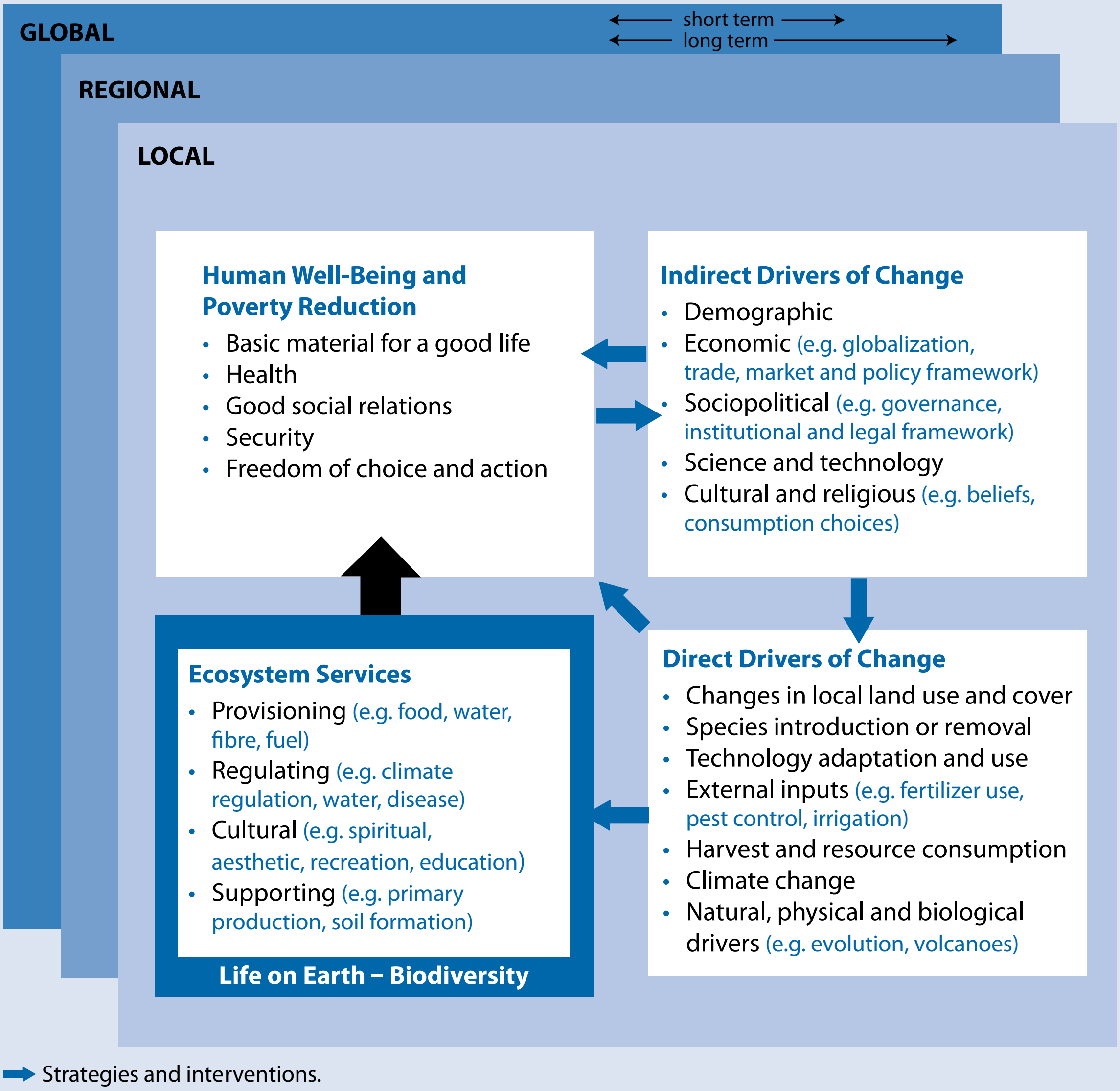


Ecosystem Services and Human Well-Being

As noted in the context of livelihoods (discussed above), humans depend on ecosystems for a wide variety of services. A useful tool for examining poverty-environment linkages is the Millennium Ecosystem Assessment, a state-of-the-art scientific appraisal conducted by more than 1,300 experts worldwide from 2001 to 2005 of the condition of and trends in the world's ecosystems and the services they provide. The assessment examined the consequences of ecosystem change for human well-being, and its findings provide a scientific basis for action to conserve ecosystems and ensure that their services are used in a sustainable manner.

Figure 2.2, taken from the Millennium Ecosystem Assessment, depicts the relationship between environmental management and poverty reduction. As shown in the figure, shifts in indirect drivers of ecosystem change (upper right corner), such as population, technology and lifestyle, act on direct drivers of change (lower right corner), such as fish catch or fertilizer use. The resulting changes in ecosystems and the services they provide (lower left corner) affect human well-being (upper left corner). These interactions take place across scales of time and space. For instance, a rise in demand for timber in one region can lead to a loss of forest cover in another region, which in turn can produce greater frequency or intensity of flooding along a local stretch of river. At the global scale, production and consumption patterns and the greenhouse gas emissions from one country contribute to climate change and indirectly affect countries and people across

Figure 2.2 Linkages between Ecosystem Services, Human Well-Being and Poverty Reduction



Source: MA 2005.

the world, in particular the poorest ones. Different strategies and interventions can be applied at many points in this framework to enhance human well-being and conserve ecosystems (MA 2005).

The Relevance of Poverty-Environment Linkages to Achieving the MDGs

The contribution of the environment to poverty reduction and human well-being can also be expressed through the lens of the MDGs, as shown in table 2.1.

Table 2.1 Contribution of the Environment in Achieving the MDGs

Goal	Poverty-environment linkages
Poverty 1. Eradicate extreme poverty and hunger	• Livelihood strategies and food security of poor households typically depend directly on ecosystem health and productivity and the diversity of services they provide • Poor households often have insecure rights to land, water and natural resources, and inadequate access to information, markets and rights to participate in decisions that affect their resource access and use, thus limiting their capability to use environmental resources sustainably to improve their livelihoods and well-being • Vulnerability to environmental risks—such as floods, droughts and the impacts of climate change—undermines people's livelihood opportunities and coping strategies, thus limiting their ability to lift themselves out of poverty or avoid falling into poverty
Gender and education 2. Achieve universal primary education 3. Promote gender equality and empower women	• Environmental degradation contributes to an increased burden on women and children (especially girls) in terms of the time required to collect water and fuelwood, thus reducing the time they have available for education or income-generating activities • Including the environment within the primary school curriculum can influence the behaviour of young people and their parents, thereby supporting sustainable livelihoods • Women often have limited roles in decision-making, from the community level to national policymaking, which prevents their voices from being effectively heard, particularly with respect to their environmental concerns • Women often have unequal rights and insecure access to land and natural resources, limiting their opportunities and ability to access productive assets
Health 4. Reduce child mortality 5. Improve maternal health 6. Combat HIV/AIDS, malaria and major diseases	• Water- and sanitation-related diseases (such as diarrhoea) and acute respiratory infections (primarily from indoor air pollution) are two of the leading causes of under-five child mortality • Damage to women's health from indoor air pollution or from carrying heavy loads of water and fuelwood can make women less fit for childbirth and at greater risk of complications during pregnancy • Malaria, annual killer of an estimated 1 million children under age five, may be exacerbated as a result of deforestation, loss of biodiversity and poor water management • Up to a quarter of the burden of disease worldwide is linked to environmental factors—primarily polluted air and water, lack of sanitation and vector-borne diseases; measures to prevent damage to health from environmental causes are as important, and often more cost-effective, than treatment of the resulting illnesses • Environmental risks, such as natural disasters, floods, droughts and the effects of ongoing climate change, affect people's health and can be life threatening
Development partnership 8. Develop a global partnership for development	• Natural resources and sustainable environmental management contribute to economic development, public revenues, the creation of decent and productive work and poverty reduction • Developing countries, especially small island States, have special needs for development assistance, including increased capacity to adapt to climate change and to address other environmental challenges, such as water and waste management

Sources: Adapted from DFID et al. 2002 and WHO 2008.

2.3 Importance of Natural Capital to the Wealth of Low-Income Countries

Another significant aspect of the contribution of the environment to human well-being and pro-poor economic growth centres on the role of natural capital in the wealth of nations, especially in low-income countries. Natural resources, particularly agricultural land, subsoil minerals and timber and other forest resources, make up a relatively larger share of the national wealth in less developed economies (World Bank 2006). Low-income countries are consequently more dependent on their natural resources for their well-being (table 2.2).

Table 2.2 Distribution of National Wealth by Type of Capital and Income Group

	Natural capital		Produced capital		Intangible capital		
Income group	**$ per capita**	**% share**	**$ per capita**	**% share**	**$ per capita**	**% share**	**Total**
Low-income countries	1,925	26	1,174	16	4,434	59	7,532
Middle-income countries	3,496	13	5,347	19	18,773	68	27,616
High-income OECD countries	9,531	2	76,193	17	353,339	80	439,063
World	4,011	4	16,850	18	74,998	78	95,860

Source: World Bank 2006.

Notes: All dollars are at nominal exchange rates. Oil States are excluded. OECD: Organisation for Economic Co-operation and Development.

Decision-makers should bear in mind the importance of environmental quality and natural resources as capital assets that can be maintained or enhanced through sound management or depleted through mismanagement. Thus, considering ways to optimize the management and use of environmental assets needs to be an integral part of national development planning. The central importance of natural capital in most developing economies points to the challenging nature of mainstreaming poverty-environment linkages, given the high economic and political stakes and the often conflicting priorities of various stakeholders concerning access, use and control of environmental assets.

2.4 Importance of Climate Change for Poverty-Environment Mainstreaming

Many of the countries that are experiencing the greatest shocks due to climatic changes are low-income countries. In these countries, improved environmental management can reduce the impact of and improve recovery from extreme weather events (McGuigan, Reynolds and Wiedmer 2002). Box 2.2 outlines some key aspects of mainstreaming the linkages between poverty reduction and climate change adaptation into national development planning.

Box 2.2 Integrating Climate Change Adaptation into National Development Planning

Examining a country's vulnerability to the impacts of climate change is a key aspect of mainstreaming poverty-environment linkages into national development planning. Among the issues decision-makers need to consider are the effects of climate change on poverty and growth and potential strategies for adaptation to climate change impacts in the immediate and longer terms.

The types of possible effects of climate change and their severity will vary by country and region. Effective poverty-environment mainstreaming should, at a minimum, do the following:

- Identify the population groups, regions and sectors currently at greatest risk (for example, due to poverty, lack of development or existing degradation of natural resources)
- Consider the degree to which current development strategies and sector programmes are vulnerable to climate variability and examine options to enhance their resilience
- Explore ways to factor the impacts of projected climate change into development planning decisions to minimize risk and build resilience

The challenge for poverty-environment mainstreaming is to increase decision-makers' awareness of climate change, identify the aspects of national economies that are most sensitive to current risks and vulnerabilities, and build national capacity for ongoing analysis of future risks and potential adaptation strategies.

Chapter 3

An Approach to Poverty-Environment Mainstreaming

Coverage

- Proposes a programmatic approach to poverty-environment mainstreaming (section 3.1)
- Discusses the role of stakeholders and the development community (section 3.2)

Key Messages

- Successful mainstreaming requires first and foremost the involvement of many stakeholders, whose various efforts can be strengthened and connected by adopting a programmatic approach
- The approach is a flexible model that helps guide the choice of activities, tactics, methodologies and tools to address a particular country situation
- The chronology of the approach is not rigid, and there are many interlinkages between activities
- The champions taking the lead will vary from country to country and possibly throughout the process
- Close collaboration with development actors is vital for ensuring the relevance and effectiveness of the initiative and for obtaining political, technical and financial support

3.1 Programmatic Approach

The aim of poverty-environment mainstreaming is to integrate the contribution of the environment to human well-being, pro-poor economic growth and achievement of the MDGs in the core business of government, overall national development and poverty reduction strategies, and sector and subnational planning and investment.

The programmatic approach the UNDP-UNEP Poverty-Environment Initiative recommends for mainstreaming poverty-environment linkages into national development planning comprises three components:

- **Finding the entry points and making the case**, which sets the stage for mainstreaming
- **Mainstreaming poverty-environment linkages into policy processes**, which is focused on integrating poverty-environment linkages into an ongoing policy process, such as a PRSP or sector strategy, based on country-specific evidence
- **Meeting the implementation challenge**, which is aimed at ensuring integration of poverty-environment linkages into budgeting, implementation and monitoring processes

Figure 3.1 presents the activities that can take place throughout the mainstreaming effort.

Using this approach can help in prioritizing mainstreaming efforts in a specific national context and seeing more clearly how different activities and tactics can be combined to achieve intended outcomes at different stages in the design or implementation of development planning (figure 3.2). Also, it can help structure programmes adopted by governments to achieve effective mainstreaming over a sustained time period—often building on more diverse and short-lived activities adopted by multiple stakeholders.

As noted in chapter 1, this programmatic approach should be considered a **flexible model** to help guide the choice of activities, tactics, methodologies and tools in a particular country situation. Depending on the context and collective progress made to date with respect to poverty-environment mainstreaming in the country, some activities might be implemented in an accelerated manner or skipped; their sequence is not rigid either. Each component builds on previous activities and work carried out in the country. The process is iterative, with many interconnections between activities. Stakeholder engagement, coordination with the development community and institutional and capacity strengthening take place at all stages, from inception through policy development, implementation and monitoring.

Examples: Iterative Approach

- The development of poverty-environment indicators builds on the targets set in policy documents while mainstreaming poverty-environment issues into policy processes.
- The monitoring system aims to inform the integration of poverty-environment linkages into policy processes.
- Budgeting relies on the development and costing of policy measures.

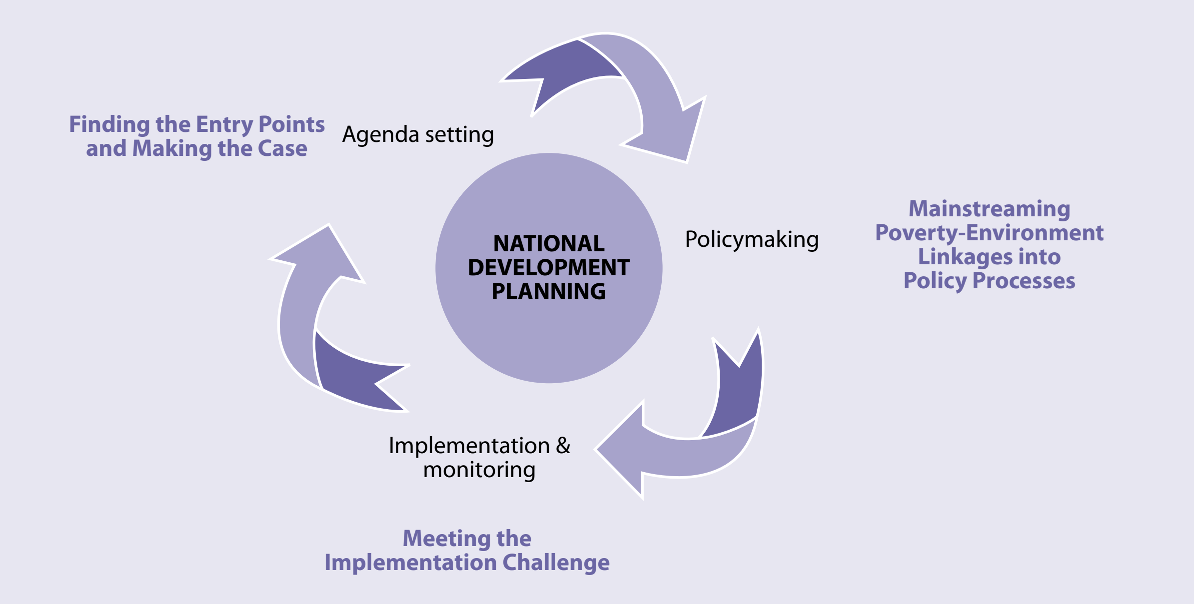
This approach also provides a framework to mainstream specific environmental issues—such as climate change, chemicals management, sustainable land management, sustainable consumption and production, and water resource management—into national development planning. Box 3.1 provides a checklist of outcomes to be achieved throughout the application of the approach.

Figure 3.1 Programmatic Approach to Poverty-Environment Mainstreaming

Finding the Entry Points and Making the Case	Mainstreaming Poverty-Environment Linkages into Policy Processes	Meeting the Implementation Challenge
Preliminary assessments Understanding the poverty-environment linkages Understanding the governmental, institutional and political contexts	**Collecting country-specific evidence** Integrated ecosystem assessment Economic analysis	**Including poverty-environment issues in the monitoring system** Indicators and data collection
	Influencing policy processes National (PRSP/MDG), sector and subnational levels	**Budgeting and financing** Financial support for policy measures
Raising awareness and building partnerships National consensus and commitment	**Developing and costing policy measures** National, sector and sub-national levels	**Supporting policy measures** National, sector and sub-national levels
Strengthening institutions and capacities Needs assessment Working mechanisms	**Strengthening institutions and capacities** Learning by doing	**Strengthening institutions and capacities** Mainstreaming as standard practice

Engaging stakeholders and coordinating within the development community
Government, non-governmental and development actors

Figure 3.2 Relationship of the Programmatic Approach to the National Development Planning Cycle



Box 3.1 Progress Checklist for Poverty-Environment Mainstreaming

Finding the Entry Points and Making the Case

- ✓ Entry points for poverty-environment mainstreaming agreed on and related road map taken into account in the workplan for the following stage of the effort
- ✓ Key ministries (e.g. environment, finance, planning, sectors) relevant to the agreed entry points are members of the steering committee or task force of the poverty-environment mainstreaming effort
- ✓ Poverty-environment champions liaising with in-country donor coordination mechanisms
- ✓ Activities to be implemented in collaboration with finance and planning or relevant sector ministries included in the workplan for the following stage of the effort

Mainstreaming Poverty-Environment Linkages into Policy Processes

- ✓ Country-specific evidence collected on the contribution of the environment to human well-being and pro-poor economic growth
- ✓ Poverty-environment linkages included in the working documents produced during the targeted policy process (e.g. documents produced by the working groups of the PRSP or relevant sector and subnational planning processes)
- ✓ Environmental sustainability included as a priority in the completed policy documents of targeted policy process (e.g. PRSP, MDG strategy, relevant sector or subnational plan)
- ✓ Policy measures to mainstream poverty-environment linkages costed by finance and planning or sector ministries and subnational bodies

Meeting the Implementation Challenge

- ✓ Poverty-environment indicators linked to policy documents of national development planning integrated in the national monitoring system
- ✓ Increased budget allocations for poverty-environment policy measures of non-environment ministries and subnational bodies
- ✓ Increased public expenditures for poverty-environment policy measures of non-environment ministries and subnational bodies
- ✓ Increased in-country donor contributions for poverty-environment issues
- ✓ Poverty-environment mainstreaming established as standard practice in government and administrative processes, procedures and systems (e.g. budget call circulars, systematic public environmental expenditure reviews and other administrative procedures and systems)

Long-Term Outcomes

- ✓ Institutions and capacities strengthened for long-term poverty-environment mainstreaming
- ✓ Conditions for simultaneous improvement in environmental sustainability and poverty reduction enhanced

Finding the Entry Points and Making the Case

This group of activities sets the stage for mainstreaming. It includes activities designed to help countries identify desirable pro-poor environmental outcomes and entry points into the development planning process as well as those aimed at making a strong case for the importance of poverty-environment mainstreaming. It thus consists of the initial set-up work that must take place before a full mainstreaming initiative goes forward. Key activities include the following:

- **Carry out preliminary assessments.** Mainstreaming poverty-environment linkages into national development planning starts with conducting assessments of the nature of poverty-environment linkages and vulnerability to climate change in the country, and other assessments that increase understanding of the country's governmental, institutional and political contexts. This entails identifying pro-poor environmental outcomes to be achieved and the governance, institutional and development factors that affect planning and decision-making at national, sector and subnational levels. It is also important to understand government, donor and civil society processes that shape development priorities. These preliminary assessments enable countries to identify the right entry points and possible champions for poverty-environment mainstreaming.
- **Raise awareness and build partnerships.** The preliminary assessments described above provide the information needed to raise the awareness of decision-makers and to develop convincing arguments for partnerships within and beyond government. From the outset, the priority is to engage with the finance and planning ministries responsible for economic development, and to bring the environmental institutions into the planning process.
- **Evaluate institutions and capacities.** Complementing the preliminary assessments are rapid assessments of institutional and capacity needs. This activity helps countries design a better poverty-environment mainstreaming initiative, rooted in national and local institutional capabilities.
- **Set up working mechanisms.** Establishing working arrangements that can sustain a long-term effort to mainstream poverty-environment linkages is an essential preparatory activity. It entails securing commitment on the part of participants in planning and finance ministries and those in environment-related agencies. The arrangements made must be conducive to building consensus among the diverse participants in poverty-environment mainstreaming.

Mainstreaming Poverty-Environment Linkages into Policy Processes

This component of the programmatic approach is concerned with integrating poverty-environment linkages into a policy process and the resulting policy measures. The effort targets a specific policy process—such as a national development plan or sector strategy—previously identified as an entry point. Its activities build on previous work, especially preliminary assessments, awareness-raising and partnership-building, and include the following:

- **Collect country-specific evidence.** Targeted analytical studies are undertaken that complement and build on the preliminary assessments to unearth evidence about the nature of poverty-environment linkages in the country. These studies further build the case for the importance of poverty-environment mainstreaming and help examine the issue from different perspectives. Such studies might include integrated ecosystem assessments and economic analyses using extensive amounts of national data to elucidate the specific contributions of the environment and natural resources to both the national economy and human well-being in the country.

The likely effects of climate change should be integrated into these studies, by making use of additional analyses such as vulnerability and adaptation assessments and by taking into account the content and lessons learned when developing national communications and national adaptation programmes of action under the United Nations Framework Convention on Climate Change.

- **Influence policy processes.** The collection of country-specific evidence provides a sound basis for efforts to influence the targeted policy process. Armed with such evidence, practitioners are better able to identify priorities and craft the arguments necessary to have an impact on the targeted policy process (such as a PRSP, MDG strategy or sector plan) and its associated documents. This requires attention to alignment with governance mechanisms shaping the policy process, which may entail engagement with institutional working groups and stakeholders and coordination with relevant donors. The resulting output of the targeted policy process should include strategic and sector-specific goals and targets, supported by specific plans for implementation.
- **Develop and cost policy measures.** Once poverty-environment linkages have been integrated in the policy document, mainstreaming efforts continue with the development and initial costing of policy measures. These measures might be systemic interventions (such as fiscal measures), or they might be more narrowly focused, such as sector interventions (targeting, for example, agricultural legislation, promotion of renewable energy or the conservation of protected areas) or subnational interventions (targeting a specific region of the country).
- **Strengthen institutions and capacities.** Institutional and capacity strengthening occurs throughout the mainstreaming initiative and is accomplished through tactical capacity-building, including the sharing of analytical results, policy briefs, on-the-job learning and more formal types of training. In addition, demonstration projects can illustrate on the ground the contribution of the environment to the economy while strengthening institutions and national capacities.

Meeting the Implementation Challenge

The final and most sustained set of activities in the mainstreaming effort focuses on making poverty-environment mainstreaming operational through engagement in budgeting, implementation and monitoring processes. These activities are aimed at ensuring that poverty-environment mainstreaming becomes established as standard practice within the country and include the following:

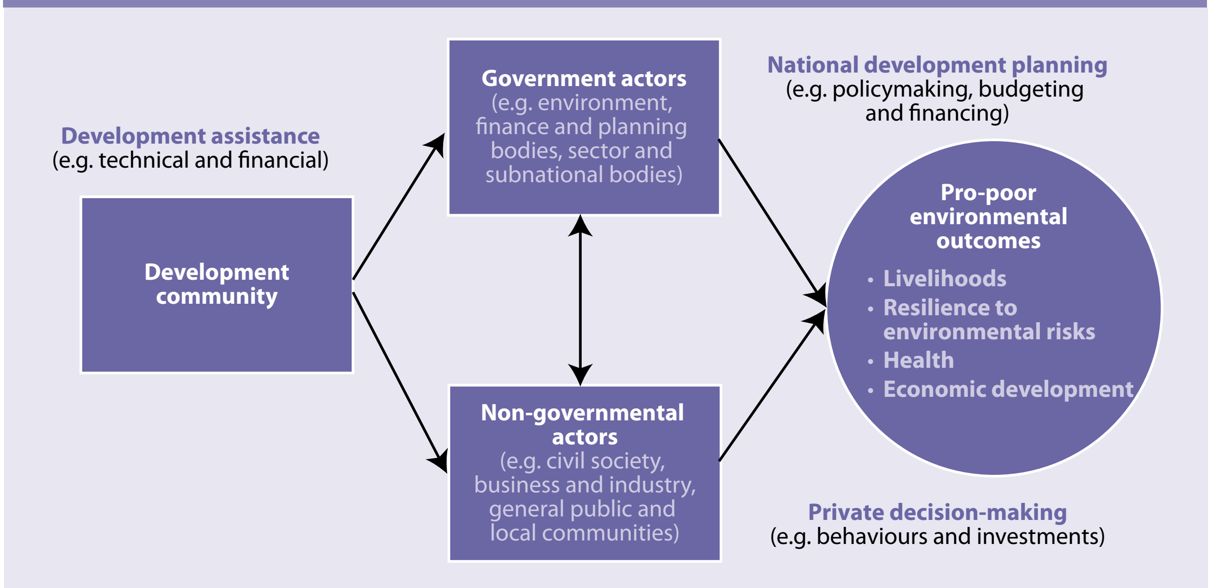
- **Integrate poverty-environment linkages in the monitoring system.** The integration of these linkages in the national monitoring system enables a country to track trends and the impact of policies as well as emerging issues such as climate change. Building on the sector-specific goals and targets included in the PRSP or similar policy documents, key priorities are to design appropriate poverty-environment indicators, strengthen data collection and management, and fully integrate poverty-environment linkages in the national monitoring system.

- **Budget for and finance poverty-environment mainstreaming.** This activity entails engaging in budgeting processes to ensure that these incorporate the economic value of the environment's contribution to the national economy and pro-poor economic growth, and that the policy measures associated with poverty-environment mainstreaming are funded. The government also needs to develop financing options, including interventions to improve the domestic financial base for environmental institutions and investments.
- **Support policy measures at national, sector and subnational levels.** This activity involves collaborating with sector and subnational bodies to build their capacities to mainstream poverty-environment linkages within their work and effectively implement policy measures at various levels.
- **Strengthen institutions and capacities.** In order to strengthen institutions and capacities in the long term, it is critical to establish poverty-environment mainstreaming as standard practice in government and administrative processes, procedures and systems at all levels.

3.2 Role of Stakeholders and the Development Community

Successful mainstreaming requires the engagement of many stakeholders, encompassing government and non-governmental actors and the broader development community (including United Nations agencies) operating in the country. Focusing on the pro-poor environmental outcomes to be achieved, a mainstreaming effort should be based on careful analysis and an understanding of the roles of different stakeholders in the country's development processes and how to best complement them, as depicted in figure 3.3. This includes awareness of the fact that stakeholders have different interests and that some may not be as supportive as others of poverty-environment mainstreaming, improved environmental management and pro-poor reforms. It is critical to understand what motivates various stakeholders and determine how to craft appropriate arguments that will appeal to different interests.

Figure 3.3 Roles of the Various Stakeholders in Achieving Pro-Poor Environmental Outcomes



Government and Non-Governmental Actors

The mainstreaming effort entails the cooperation of many government actors, each of which raises significant challenges and opportunities throughout the process (table 3.1).

An early crucial decision in the process is determining which government agency will lead the mainstreaming effort. Because of the close relationship between poverty-environment mainstreaming and national development planning, the ministry of planning or finance, in collaboration with environmental institutions, will usually be a logical choice.

Non-governmental actors can play a key role in advancing the integration of poverty-environment linkages into national development planning, and powerful advocates can be found among them. Involving these actors, including local communities, is an integral part of a mainstreaming initiative and should take place throughout the effort. Challenges that may be encountered when engaging with non-governmental actors include lack of awareness, weak capacities and conflicting interests with respect to poverty-environment policy measures (table 3.2).

Development Community

Harmonization, Alignment and Coordination

In accord with the Accra Agenda for Action (2008), the Paris Declaration on Aid Effectiveness (2005) and the Rome Declaration on Harmonization (2003), development actors are striving for increased harmonization, alignment and coordination of their support to the governments of developing countries (World Bank 2008; OECD 2005: Aid Harmonization 2003). It is important to ensure that mainstreaming efforts are embedded in existing donor coordination mechanisms. This includes engaging with relevant donor groups and individual donors to ensure that mainstreaming operations are in line with the agreed harmonization, alignment and coordination principles for the country.

Political, Financial and Technical Support

Close collaboration and dialogue with various development actors are vital not only for ensuring the relevance and effectiveness of the mainstreaming initiative, but also for obtaining political and financial support.

Donor spending on the environment has not kept pace with overall increases in aid budgets. Furthermore, donor spending on the environment has not been as coordinated as efforts in other sectors (Hicks et al. 2008). Lack of donor coordination and buy-in reduces the scope for a more strategic and unified approach to environmental management and poverty reduction. To develop a fully effective mainstreaming programme, it is necessary to build and embed support for poverty-environment mainstreaming in donor groups working on different sectors or issues (e.g. climate change).

In the longer term, collaboration with development actors can result in an increased number of actors joining the initiative and contributing funds towards sustained mainstreaming through various instruments—for example, in the form of a sectorwide approach.

A poverty-environment mainstreaming effort also benefits from the technical expertise of donors, international non-governmental organizations (NGOs) and research institutes active in the fields of the environment, development and poverty reduction.

Table 3.1 Challenges and Opportunities in Working with Government Actors		
Actor	**Challenges**	**Opportunities**
Head of state's office	• Has many priorities to deal with • May face conflicting interests	• Turn this actor into a champion • Have it take a leading role in the main-streaming effort
Political parties	• Lack direct involvement in develop-ment planning • May have limited awareness of envi-ronment-related issues • May face conflicting interests	• Use the election process to raise awareness on poverty-environment issues • Make these issues a theme of political campaigns
Parliament	• Often not involved in all stages of national development planning • May have limited awareness of envi-ronment-related issues • May face conflicting interests	• Leverage its legislative role • Foster its advocacy role, especially for budgeting • Cooperate with (or help create) commit-tees on poverty-environment issues (e.g. access to land)
Judicial system	• May have limited awareness of envi-ronment-related issues • Enforcement of laws may be lacking • May face conflicting interests	• Develop synergies with laws related to good governance (e.g. corruption, illegal trade, tax evasion)
Finance and planning bodies	• Linkages with environmental institu-tions may be weak • Environment may not be seen as a pri-ority for economic development and poverty reduction	• Turn these bodies into champions (e.g. through permanent secretaries) • Have them take a leading role in the effort (with environmental institutions) • Develop synergies with revenue collection measures (e.g. fight against corruption, tax evasion)
Environmental institutions	• Financial, human and leadership ca-pacities may be weak • May be focused on projects as op-posed to development planning • May have an approach focused on protection rather than sustainable use of the environment	• Make use of their expertise, including in monitoring and climate change • Develop their potential to take several roles (e.g. advocacy, coordination) • Develop synergies (e.g. with obligations related to multilateral environmental agreements)
Sector ministries and subnational bodies	• May have weak capacities in regard to the environment • The lack of funding of subnational bodies can lead to overharvesting of natural resources • Environmental units are usually not well connected to development plan-ning	• Support them in fulfilling their roles in development planning • Make use of the fact that some of these bodies deal directly with environmental as-sets (e.g. fisheries, forestry) • Encourage them to integrate poverty-envi-ronment linkages into plans and budgets
National statistics office	• Data collection and management are often weak • Poverty-environment data are not gen-erally captured by regular surveys • Capacity to produce policy-relevant information may be weak	• Develop poverty-environment indicators and integrate them in the national moni-toring system • Build capacity to collect, manage and ana-lyse data on poverty-environment linkages

Table 3.2 Challenges and Opportunities in Working with Non-Governmental Actors

Actor	Challenges	Opportunities
Civil society organizations	• Capacities may be weak, especially with respect to engagement in national development planning • Often not involved in all stages of national development planning	• Make use of their expertise, including in addressing gender issues related to the environment • Help reflect local realities and bring voices from the community level • Foster their role in information collection, information-sharing and awareness-raising (from policymakers to local communities) • Encourage them in their watchdog role (i.e., in promoting transparency and accountability) • Turn them into champions for poverty-environment mainstreaming
Academic and research institutes	• May be disconnected from national development planning processes • Capacity to produce policy-relevant information may be weak	• Make use of their expertise, particularly with respect to data collection, analysis of poverty-environment linkages and collection of country-specific evidence • Promote interdisciplinary teams • Promote South-South and North-South cooperation (twinning approaches)
Business and industry	• May perceive environmental management and legislation (e.g. environmental impact assessments) as a barrier to their activities	• Mitigate the effect of their activities that have a large impact on poverty and the environment (e.g. mining, forestry, water services) • Make use of this major source of knowledge • Make use of this major source of investment • Focus on resource efficiency and sustainable consumption and production (e.g. sustainable energy, water efficiency, integrated waste management)
General public, local communities and small-scale farmers and fishers	• Ability to make their voices heard may be weak or non-existent • Generally disconnected from national development planning processes	• Include the poorest groups of the population • Integrate the voices of the poorest when defining the outcomes of the poverty-environment mainstreaming effort • Make use of their knowledge of poverty-environment issues at the grass-roots level
Media	• May lack knowledge of and attention to poverty-environment issues • May lack freedom of expression	• Make use of their role in shaping the opinions of both decision-makers and the general public • Work with them to encourage public involvement in national development planning • Collaborate with them to reach out to the community level • Provide them with scientific and policy-related information

United Nations

Cooperation, coordination and harmonization among the United Nations agencies is important both for increasing effectiveness and for gaining political support for their in-country work. When one or more United Nations agencies are supporting a poverty-environment mainstreaming initiative, the programme should be embedded into the United Nations Development Assistance Framework, the One UN Programme (where applicable) and the work programmes of participating agencies (UNDG 2007).

As a lead United Nations agency in the field of development and poverty reduction, UNDP is in a strategic position to advance mainstreaming into national development planning with the government and other partners. Within UNDP, it is important to ensure that both poverty reduction and energy and environment practices are engaged in such an effort. Other United Nations agencies active in the country are also potential partners through their technical expertise and their existing programmes and networks.

Practitioners working on mainstreaming poverty-environment linkages can seek to partner with the United Nations initiatives described in box 3.2.

Box 3.2 United Nations Initiatives and Their Potential Contribution to Poverty-Environment Mainstreaming

UNDP MDG Support Initiative. The initiative is designed to quickly mobilize technical support from across UNDP and the United Nations system to help developing country governments achieve the MDGs. It provides countries with a menu of services that can be adapted to the development context and demands of each country, both nationally and locally, in three focal areas: MDG-based diagnostics, needs assessments and planning; widening access to policy options, including costing; and strengthening national capacity to deliver.

UNDP-UNEP Partnership on Climate Change and Development. The partnership aims to help developing countries achieve sustainable development in the face of a changing climate. It has two core objectives: incorporating climate change adaptation into national development plans and United Nations cooperation frameworks; and helping countries access carbon finance and cleaner technologies. The partnership mainstreams climate change concerns into national development strategies through a three-pronged approach, involving national development strategies, United Nations country programming and pilot projects.

UNDP-UNEP Partnership Initiative for the Sound Management of Chemicals. The partnership helps countries assess their national regimes for sound management of chemicals, develop plans to address gaps in these regimes and improve the integration of sound management of chemicals priorities into the national development discourse and planning agenda. The partnership is currently active in Uganda, the former Yugoslav Republic of Macedonia and Zambia.

UNEP's Sustainable Consumption and Production Programme. The programme focuses on promoting sustainable consumption and production among public and private decision-makers. Activities aim to facilitate the processing and consumption of natural resources in a more environmentally sustainable way over the whole life cycle. In doing so, the work contributes to decoupling growth in production and consumption from resource depletion and environmental degradation. The approach offers numerous opportunities, such as the reduction of production costs, the creation of new markets and jobs, pollution prevention and leapfrogging to efficient and competitive technologies.

(continued)

Box 3.2 United Nations Initiatives and Their Potential Contribution to Poverty-Environment Mainstreaming (continued)

United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (UN-REDD). This programme is a collaboration among the Food and Agriculture Organization of the United Nations, UNDP and UNEP aimed at managing forests in a sustainable manner so they benefit communities while contributing to reductions in greenhouse gas emissions. The immediate goal is to assess whether payment structures and capacity support can create the incentives to ensure lasting and measurable emission reductions while maintaining the other ecosystem services forests provide. The programme looks to establish whole-of-government responses and contributions to national strategies to reduce emissions from deforestation and forest degradation.

UNDP-UNEP Poverty-Environment Initiative. The PEI supports country-led programmes to mainstream poverty-environment linkages into national development planning. At the time of publication, the PEI was working in Bhutan, Burkina Faso, Kenya, Malawi, Mali, Mauritania, Mozambique, Rwanda, Uganda, United Republic of Tanzania and Viet Nam. It supports countries throughout the mainstreaming effort, from carrying out preliminary assessments to supporting policy measures. Countries can access financial and technical assistance to set up dedicated country teams based in the government lead institution(s) and carry out activities to address the particular country situation. The PEI approach provides a framework to jointly mainstream various environmental issues—such as climate change, chemicals management, sustainable land management, sustainable consumption and production and water resource management.

Chapter 4

Finding the Entry Points and Making the Case

Coverage

- Provides guidance on assessing poverty-environment linkages (section 4.1)
- Discusses assessments of a country's governmental, institutional and political contexts (section 4.2)
- Reviews awareness-raising and partnership-building (section 4.3)
- Introduces institutional and capacity needs assessments (section 4.4)
- Highlights working arrangements for a sustained mainstreaming effort (section 4.5)

Key Messages

- Identify pro-poor environmental outcomes on which to focus and entry points for mainstreaming poverty-environment issues in national development planning
- Raise awareness and develop partnerships with a view to making the case for mainstreaming
- Engage from the outset with the finance and planning ministries and bring environmental institutions into national development planning processes
- Understand which institutional actors have key roles and may be willing to champion poverty-environment mainstreaming

4.1 Preliminary Assessments: Understanding the Poverty-Environment Linkages

Typically, the first step of a poverty-environment mainstreaming effort is to undertake a preliminary assessment of the country's environmental and socio-economic situation. The objective is to determine the nature of poverty-environment linkages in the country. Another aim is to define pro-poor environmental outcomes on which to focus the poverty-environment mainstreaming effort and to develop arguments to start making the case for such an initiative. Through this assessment, the actors engaged in the mainstreaming initiative begin to refine their understanding—from the perspective of their own sector or subnational organization—of the country's environmental challenges, poverty-environment linkages and the relevance of these to national priorities.

Approach

These preliminary assessments of poverty-environment linkages are based primarily on existing information. Their conduct thus includes collecting information from existing sources and mobilizing local expertise. The following are among the elements to consider:

- **State of the environment.** Review and gather information on the state of the environment and on current and emerging environmental challenges such as climate change.
- **Socio-economic situation.** Review baseline data on poverty and population's socio-economic status, including data disaggregated by demographics such as age, sex and geographical location.
- **Poverty-environment linkages.** Identify the linkages between poverty and the environment (e.g. main ecosystem services, food security, vulnerability to effects of climate change, deforestation, livelihoods of men and of women), focusing on national development priorities (box 4.1).
- **Poverty-environment sector linkages.** Understand the relevance of the environment to human well-being and pro-poor economic growth and development sectors, such as agriculture, forestry, water and sanitation, industrial development, health, trade, transport, energy, education and tourism.
- **Pro-poor environmental outcomes.** Build on the above findings and make use of methodologies such as problem and stakeholder analysis to define possible pro-poor environmental outcomes that can guide the poverty-environment mainstreaming effort. Link the pro-poor environmental outcomes to national priority development issues and existing efforts in the field

Examples: The Strength of Sectoral Poverty-Environment Linkages

- **Agriculture.** Information on soil erosion and its negative impact on agricultural productivity can foster interest from the agricultural sector and concerned communities.
- **Tourism.** Documenting the potential incomes or savings generated by ecotourism and protected areas can help make the case for poverty-environment mainstreaming.
- **Waste management.** Understanding how integrated waste management reduces the impacts of unsuitable waste disposal on human health and land and water resources can inform sector policymaking and budgeting.

Box 4.1 Importance of Ecosystem Services for Human Well-Being and Pro-Poor Economic Growth: Examples from Selected Countries

- **Cameroon.** Located in a dry area of erratic rainfall, the Waza Logone flood plain is a highly productive ecosystem and a critical area for biodiversity. Some 130,000 people rely on the flood plain and its wetland resources for their basic income and subsistence. However, the flood plain has been degraded through major irrigation schemes implemented without due consideration of the impacts on wetland ecosystems. Pilot efforts to restore the ecosystem services provided by the flood plain have been carried out. Based on the results, experts estimate that full restoration of natural inundation patterns would yield incremental economic benefits ranging from $1.1 million to $2.3 million per year. This translates into $50 of added economic value each year for each member of the local population dependent on the flood plain for livelihood (Emerton 2005).
- **Kenya.** The Aberdare mountain range of central Kenya provides a wide range of ecosystem goods and services essential to the livelihoods and well-being of millions. The livelihood of one in three Kenyans depends in some way on the rainfall, rivers, forests and wildlife of the Aberdares. Five of Kenya's seven largest rivers originate in the Aberdares, providing water and hydroelectric power to millions of farmers and several major towns downstream. Over 30 per cent of the nation's tea production and 70 per cent of its coffee are grown on the slopes and foothills of the Aberdares. The city of Nairobi and its 3 million inhabitants depend entirely on water from the mountain range. More than 350,000 people visit the Aberdares National Park and Forest Reserve annually, generating some 3.8 billion Kenya shillings (close to $50 million) in revenue (UNDP-UNEP PEI Kenya 2008).
- **Nepal.** About a third of the world's population lives in countries with moderate to high water stress, with disproportionate impacts on the poor. With current projected human population growth, industrial development and expansion of irrigated agriculture in the next two decades, water demand will rise to levels that will make the task of providing water for human sustenance more difficult. In Nepal, low-cost drip irrigation has proven to be a win-win solution for resource-poor farmers and the environment. For as little as $13 per drip irrigation kit, farmers can expect improvements in yield of 20–70 per cent by delivering the right amount of water to crops at the right time while saving water for other purposes. Over a three-year period, a farmer's investment can generate incremental gains worth $570 (SIWI 2005).

of poverty-environment in the country. The pro-poor environmental outcomes identified here will be built on when setting up working arrangements for sustained mainstreaming (see section 4.5).

- **Benefits and costs of action and inaction.** Estimate the benefits of investment in better environmental management for the poor and for the economy overall. Estimate the costs incurred due to poor environmental management and resulting environmental degradation. Estimate the benefit-cost ratio for investments in environmental management or the return on investment, and estimate the loss of revenue to the government.

Practitioners working on mainstreaming poverty-environment linkages should rely on existing analytical work, such as environmental assessments and available facts, figures and studies. They should build on the knowledge of national stakeholders, nongovernmental actors and local communities (box 4.2). Practitioners can also commission additional work (e.g. problem analysis) or studies targeted at potential areas of economic contribution to make the case for a national poverty-environment mainstreaming effort.

Box 4.2 Understanding Poverty-Environment Linkages: Voices from the Community

Participants in community-based planning sessions in three districts of Kenya bear witness to the impact of poverty-environment linkages at the local level:

> *I lost the whole of my farm to sand harvesters. All the fertile soil was removed and washed into the lake causing me to abandon the farm, and I have only returned to it now when the district environment officer has stopped sand mining in the area. I can now grow some crops although I have lost all the fertile soil.* Female farmer, Bondo District
>
> *I wish I had never uprooted the coffee trees from my farm. They had soil retention capacity that I don't see with the food crops and exotic trees that we have now planted.* Elderly male farmer, Murang'a North District
>
> *We resort to illegal logging, honey harvesting and farming in the forest to make ends meet. We find farming along the river bank much easier because water is near.* Villager, Meru South District
>
> *I'm a fisherman. I used to go out and in six hours my boat was full. Now you catch nothing or maybe 1 kilogram of fish that is worth 50 Kenya shillings or so [less than $1]. Our daily expenses are over 100 Kenya shillings. You are here now and I am embarrassed that I cannot even give you a fish as a gift.* Fisherman, Bondo District

Source: UNDP-UNEP PEI Kenya 2007.

Further Guidance: Questions

A number of guiding questions can help government actors assess and understand poverty-environment linkages (box 4.3).

Box 4.3 Guiding Questions for Assessing Poverty-Environment Linkages

Livelihoods and Health

- What is the size of the **population depending for their livelihoods on natural resources and ecosystem services?** How many employment or informal income-earning opportunities do natural resource sectors (e.g. forestry and fisheries) and other productive sectors relying on the environment (e.g. hydropower, agriculture and tourism) provide, particularly to the poorest?
- What are the **direct health and productivity impacts of air, soil and water pollution** and the associated costs of inaction? What needs to be done to reduce these costs? What would be the investments required to undertake action?

Environmental Risks and Climate Change

- Are the **country's people and economy vulnerable to environmental risks** such as floods, droughts and climate change? What are the effects and costs of environmental hazards (such as floods or pollution) in terms of health, livelihoods and vulnerability?
- How **vulnerable is the country to the effects of climate change**? Do the country and people have the capacity to adapt to environmental changes that could accompany climate change? What work (if any) has been done to assess potential impacts and adapt to climate change? Does the country have a disaster risk reduction policy that incorporates climate change concerns?

Economic Development

- How much do the country's main **natural resource sectors contribute to growth**? How do natural resources contribute as inputs into other productive sectors? What percentage do these sectors represent in terms of gross domestic product? Does this take into account informal markets, and how large are these?
- Are country growth and **poverty reduction targets at risk from the impacts of persistent and insidious environmental degradation**? This could include, for instance, the long-term decline of crop productivity from soil erosion.

Overall Understanding of the Linkages

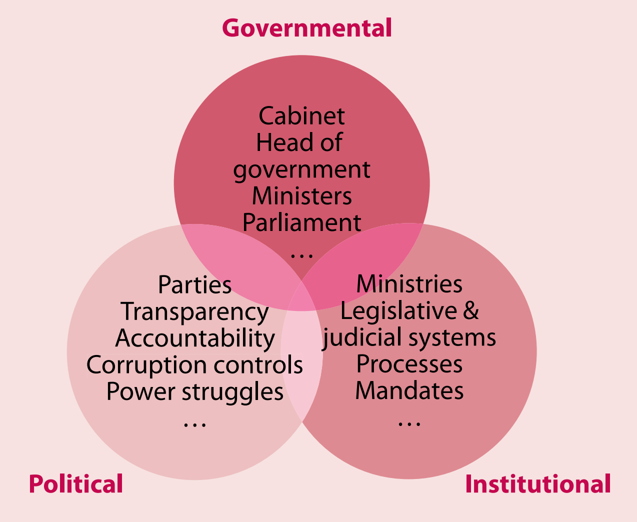
- Is there an **explicit understanding of poverty-environment linkages** (such as in terms of food security or access to fuelwood, shelter and clean water) within the country?
- How do various **demographic groups** (men and women, different age groups, different income-level groups) benefit from, or how are they affected by, these questions and linkages (in terms of their health, resilience, livelihoods, income opportunities, employment)?

Source: Adapted from DFID 2004a.

4.2 Preliminary Assessments: Understanding the Governmental, Institutional and Political Contexts

The preliminary assessments also entail looking at the governmental, institutional and political contexts in the country (figure 4.1). This assessment helps develop a thorough, shared understanding of the situation, which in turn provides the basis for finding the most effective entry points for mainstreaming poverty-environment linkages in national development planning. It also enables countries to identify potential partners and champions for poverty-environment mainstreaming.

Figure 4.1 Components in Governmental, Institutional and Political Contexts



Without the understanding gained through such preliminary assessments of the context, government actors leading a poverty-environment mainstreaming effort could seriously misjudge the country's readiness to engage in the process.

Approach

The assessment begins with identifying and understanding the various processes, institutions, actors, mandates, existing policies and other factors that affect the poverty-environment mainstreaming effort.

- **Planning processes.** Understanding the planning processes that shape a country's development and environmental priorities is a vital aspect of the assessment. Relevant processes might include strategies (PRSPs, national development plans, national sustainable development strategies, MDG strategies, sector strategies), action plans (national environmental action plans, national adaptation programmes of action) and budget processes (medium-term expenditure framework, public expenditure review).
- **Institutions and actors.** Also vital in the assessment is identifying the various institutions and actors in government, the non-governmental sector and the broader development community and understanding their activities. Identifying partners that can provide technical, financial and political support to the mainstreaming effort is crucial. Options for engaging these partners should be developed at this stage.
- **Mandates and decision-making processes.** It is critical to have a thorough knowledge of how the government develops and approves policies, budgets and related measures. In particular, it is important to know the extent to which the environment ministry can be involved in the development of policies initiated by other ministries that have significant environmental implications (the agricultural sector plan is one such policy). Understanding informal power relations is also central to the mainstreaming effort.

- **Existing policies and initiatives.** It is important to take stock of major existing national and sector (e.g. agriculture, health, trade, education, industrial development, cleaner production and environment) development policies, programmes and projects, and climate change-related initiatives that are relevant to the poverty-environment mainstreaming effort, and to identify possible conflicting priorities.
- **Governance and political situation.** Natural resources typically are important sources of national wealth, and different institutions and actors often have conflicting priorities concerning access to or control of their use. It is critical to be aware of and understand the political factors that may affect the mainstreaming effort either positively or negatively. These factors include the transparency and accountability of decision-making concerning natural resource management and the resulting distributional impacts (WRI 2005). It also entails assessing the quality of the legislative and judicial systems, the rule of law and corruption control in the country. In addition, countries should take account of short-term political drivers such as upcoming elections, changes in mandates or roles, possible competition among agencies or ministries and other governance factors.

Example: Attention to Environmental Governance in the United Republic of Tanzania

Like many other developing countries rich in natural resources, the United Republic of Tanzania has faced environmental governance issues in regulating access to and use of these resources. For instance, a recent report estimated that only 4–15 per cent of public revenues due from logging operations districts in the south of the country were actually being collected (Milledge, Gelvas and Ahrends 2007). This report, together with newspaper headlines on illegal logging, has galvanized government and donor efforts to address the problem of uncollected forest revenues. The attention has also shed light on other areas of weak environmental governance, including lack of effective controls on destructive methods of fishing (e.g. dynamite fishing) and hunting. Attention to these problem areas of environmental governance has allowed the United Republic of Tanzania to better mainstream poverty-environment linkages in its poverty reduction strategy and general budget support, for which sector-specific targets have been developed.

Information Analysis

The preliminary assessment is based on analysis of existing information from sources such as planning and budgeting guidelines, national and sector policies, strategies of in-country development actors and reform agendas. Gaps in information should be identified and noted.

Preliminary assessments require interaction with a wide range of stakeholders; this includes targeted discussions and workshops with government institutions and officials at various levels, non-governmental actors and the development community.

The collected information can take the form of a SWOT—strengths, weaknesses, opportunities and threats—analysis, identifying and assessing the country's strengths, weaknesses, opportunities and threats in relation to poverty-environment mainstreaming. The results of this exercise can be translated into a short report to guide and inform subsequent activities in poverty-environment mainstreaming.

Identification of Entry Points and Potential Champions

The analysis described above enables government actors to understand the positioning of poverty-environment issues within the public agenda and to identify the most effective entry points and opportunities for mainstreaming poverty-environment linkages in national development planning. Table 4.1 presents examples of possible entry points.

Table 4.1 Possible Entry Points for Mainstreaming Poverty-Environment Linkages in National Development Planning

Planning level	Entry points
National government and cross-sector ministries	Poverty reduction strategy paper
	National development plan
	MDG-based national development strategy
	National budget allocation process or review (e.g. medium-term expenditure framework, public expenditure review)
Sector ministries	Sector strategies, plans and policies (e.g. agricultural sector plan)
	Preparation of sector budgets
	Public expenditure reviews
Subnational authorities	Decentralization policies
	District plans
	Preparation of subnational budgets

The assessment also helps in identifying and engaging with actors who may champion the poverty-environment effort. Examples of potential champions follow:

- Lead government bodies such as the head of state's office and planning and finance ministries
- Sector ministries, subnational bodies and parliament
- Non-governmental actors, including the media and women's groups
- Development actors
- Key individuals, including ministers and permanent secretaries

The experience of the United Republic of Tanzania described in box 4.4 illustrates how including government actors and civil society, and engaging with the media, can make a big difference in raising the profile of poverty-environment issues in the national development agenda.

The preliminary assessments carried out should remain limited in scope, depth and time frame, allowing the government to achieve in the short term the objectives of finding the entry points and making the case. Later in the mainstreaming effort, the preliminary assessments will be complemented by extensive analytical work aimed at influencing the policy process at stake (see sections 5.1, 5.2 and 5.3).

Box 4.4 Importance of Stakeholder Involvement: National Strategy for Growth and Reduction of Poverty, United Republic of Tanzania

The National Strategy for Growth and Reduction of Poverty of the United Republic of Tanzania, known by its Kiswahili acronym MKUKUTA, serves as the country's national development framework. The key entry point for mainstreaming poverty-environment linkages in MKUKUTA was provided by the 2004 public expenditure review, which highlighted the economic value of the environment.

Championing poverty-environment mainstreaming. In the United Republic of Tanzania, champions have been critical drivers of political discourse on the environment and of partnerships for action. In the early 1990s, a multi-stakeholder group of intellectuals felt that environmental issues had to be put directly on the mainstream political agenda. By 1995 the group had crafted an environmental manifesto which it used to lobby all political parties. Some credit this manifesto with influencing the creation of a new, high-profile Department of Environment within the Office of the Vice-President and subsequent political discussions.

- **The media** drew attention to the potential environmental impacts of significant projects, stressing the implications for people's livelihoods and encouraging increased public involvement. As the media increased the extent and quality of their coverage of poverty-environment linkages, environmental concern began to permeate to the grass roots. For example, the media highlighted excessive logging, making clear the likely impoverishment of forest-dependent local communities and losses to national income.
- **The Vice-President's Office** coordinated and championed environmental concerns at a high, non-sector level. Its involvement persuaded the Ministry of Finance to take responsibility for bringing poverty-environment issues into the core government agenda. During the policy process, the Vice-President's Office established and chaired the Environmental Sector Working Group, in line with its mandate to ensure that government policy processes be well informed on environmental matters.
- **The parliamentarians** were regularly briefed to ensure that they retained ownership of the project and remained accountable for its success.
- **Local organizations** have focused on the environment and its linkages to people's livelihoods, while the more established environmental NGOs, which in the past had tended to focus on self-contained environmental issues, have engaged on development and poverty reduction issues. These have served to increase public attention to the environment and its linkages to poverty.
- **A broad range of sectors** within government, along with civil society and ordinary citizens, were continually asked to provide inputs.
- **Partnerships** with development agencies were driven to a great extent by the government.

Lessons learned. Among the lessons emerging from this experience were the following:

- Using an approach based on widespread consultation proved effective in expanding ownership of poverty-environment mainstreaming across every level of society. The involvement of civil society also ensured that gender-related issues were integrated at all stages.
- The success of poverty-environment mainstreaming was proportionate to stakeholders' ability to work in a coordinated way with each other and with outside interests.
- Poverty-environment mainstreaming is largely a political and institutional process and thus unlikely to be achieved by solely technical means or through a single project or initiative.

Source: Adapted from Assey et al. 2007.

Further Guidance: Questions and Sources

Box 4.5 lays out several questions that countries should try to address as part of the preliminary assessment of the governmental, institutional and political contexts.

Box 4.5 Guiding Questions for Assessing the Governmental, Institutional and Political Contexts

Processes

- What are the **possible entry points** to influence national and sector development processes? How can these entry points be fully leveraged in trying to influence national development planning processes later in the poverty-environment mainstreaming effort?
- What are the **components** of the relevant national and sector development planning processes?
- What are the **timetable and working arrangements** for revising or drafting the relevant development planning processes? When and how are objectives and priorities set or revised, policy measures developed, costing and budgeting accomplished and the monitoring framework developed?
- How are the national planning processes **linked** to sector and subnational planning processes?

Institutions and Actors

- Which **government institutions** are leading the national and sector planning processes? How is their work organized?
- What are the mechanisms (e.g. working groups, consultations, development assistance coordination mechanisms) through which **other government institutions** participate? What about non-governmental actors? Is there a need to help mobilize other actors?
- How effective are the existing **mechanisms**? Is there a need to further develop or improve these?
- Does the **environment ministry** have a mandate to be involved in the development of policy with environmental implications initiated by other government institutions (e.g. the agriculture ministry)?
- Who are the potential **in-country development partners**? How could they contribute to poverty-environment mainstreaming?

Governance

- What is the **governance and political situation** in the country, and how might it affect the mainstreaming effort? Are there tensions or conflicts over natural resources? Is there freedom of the press? Do the poorest have a voice?
- Are the policy- and decision-making **processes effective and transparent**? Are there accountability mechanisms? What is the quality of the legislative and judicial systems? How is the rule of law enforced? How is corruption controlled?

In conducting this preliminary assessment of the governmental, institutional and political contexts, countries can draw on existing sources of information and analysis, including the following:

- **World Bank Country Environmental Analysis** is an upstream analytic tool that includes institutional and governance analysis, which aims to integrate environmental considerations into PRSPs and country assistance strategies.
- **European Commission Country Environmental Profiles** include reviews of environmental policy, legislative and institutional frameworks.
- **World Bank Worldwide Governance Indicators** are available for 212 countries and territories for 1996–2006; these cover six dimensions of governance: voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law and control of corruption.
- **Other Internet-based portals**, such as the UNEP Country Environmental Profile Information System and the World Resources Institute Country Profiles, also provide useful information for understanding a country's governmental, institutional and political contexts.

4.3 Raising Awareness and Building Partnerships

The preliminary assessments provide a solid basis from which to raise awareness—within the government and among non-governmental actors, the general public and the development community at large. The objective here is to build national consensus and commitment, and partnerships for poverty-environment mainstreaming.

Approach

The approach to raising awareness and building partnerships is based on sharing the findings of the two preliminary assessments—both the assessment of poverty-environment linkages and the assessment of the governmental, institutional and political contexts—as illustrated by the case of Bhutan.

Example: Bhutan Embraces the Contribution of the Environment to National Development

The UNDP-UNEP PEI has supported efforts to mainstream poverty-environment linkages into both national planning and sectors critical to Bhutan's economy. To achieve this, the PEI team engaged with key government officials to create awareness of these linkages and their relationship to economic development. The government prepared guidelines and conducted workshops as part of this effort. Complementing these activities, the Australian government implemented a capacity-building programme to train a team of officers from selected government agencies on mainstreaming concepts. A significant result is that Bhutan's Gross National Happiness Commission (the national body in charge of planning and development at the highest level) is now a strong proponent of mainstreaming and has embraced the task of integrating poverty-environment considerations into all sector development plans. A senior officer noted, "It has been unfortunate that environment has been seen as a sector issue in Bhutan so far. But it is no longer treated that way."

Source: UNDP-UNEP PEI 2008a.

Sharing the Findings of the Preliminary Assessments

Assessment findings should be disseminated broadly within the government, including to the head of state's office, environment, finance and planning bodies, sector and subnational bodies, political parties and parliament, national statistics office and judicial system.

National workshops or consultations can be held to raise awareness among various audiences, including civil society, academia, business and industry, the general public and local communities, and the media, as well as government actors. Another effective method of raising awareness is to organize field visits illustrating the importance of poverty-environment linkages. Exchange programmes with neighbouring countries that have experience with successful poverty-environment mainstreaming can also be a useful approach (see section 5.5).

Involving the Media

The involvement of the media often deserves special attention, and advantage can be gained from a specific approach designed to increase journalists' knowledge of poverty-environment linkages and to encourage them to report on poverty-environment issues. The mass media (press, radio and television) can be effective tools in reaching out to target audiences, including communities at the grass-roots level. Gender should be considered when developing the messages delivered in order to communicate them through the most appropriate and culturally sensitive channels. Country experiences demonstrate the importance of the media in raising awareness of poverty-environment issues (box 4.6).

Box 4.6 Innovative Engagement of Media to Raise Awareness: Viet Nam's "No Early Spray" Campaign

The case of Viet Nam's "No Early Spray" campaign represents an innovative use of communications techniques to raise awareness of issues related to the environment and poverty reduction. In 1994, Viet Nam's Ministry of Agriculture and Rural Development and the International Rice Research Institute launched a campaign aimed at achieving large-scale reductions in pesticide use by rice farmers in the Mekong delta. Targeting 2 million rural households, the campaign worked to increase farmers' awareness of pesticide-related issues, including associated health and environmental problems.

The campaign used radio drama clips, leaflets and posters combined with on-the-ground activities to encourage responsible use of pesticides by farmers. Follow-up surveys indicate that as a result of the campaign, insecticide use had fallen by half. Key to this success was the rigorous qualitative and quantitative research undertaken prior to setting communications objectives. This research helped campaign organizers successfully develop innovative messages and select media tools appropriate to the target audience.

The radio campaign has since been developed into a long-running drama series broadcast on two networks. It uses an entertainment-education approach, which has been successfully applied in other fields, such as HIV/AIDS awareness and social change.

In 2003, the partners decided to build upon their success by expanding the campaign to include information to help farmers optimize their seed and fertilizer use.

Source: UNEP and Futerra Sustainability Communications 2005.

Following the initial involvement of the media, their engagement needs to be maintained throughout the mainstreaming effort (e.g. through regular press releases and radio programmes).

Involving Potential Partners

A successful, sustained poverty-environment mainstreaming effort requires partnerships with the development community, including international funding institutions, multilateral and bilateral donors, and international and national NGOs. Partnerships with development actors are important for their substantive contributions and for generating joint initiatives and leveraging in-country funding for poverty-environment mainstreaming.

In building partnerships, it is critical to go beyond simply informing the various stakeholders. Special efforts should be made to cultivate the attention of potential partners, using arguments that are targeted to the specific partners and to their particular interests in order to make the case for poverty-environment mainstreaming. The information developed in the preliminary assessments of poverty-environment linkages should be helpful in this regard.

Example: Ministries Partner to Halt Environmental Degradation in Mozambique

In Mozambique, the ministries responsible for the environment and for planning jointly contributed to poverty reduction by enabling a community to halt environmental degradation at the local level. As part of PEI support to the Ministry of Planning and Development and to the Ministry for Coordination of Environmental Affairs, a pilot project was initiated to address specific environmental problems identified by a local community in the town of Madal. During the rainy season, homes and roads were often washed away, severely affecting livelihoods. The PEI team helped the local community identify the root cause of the problem—soil erosion—and then supported the community in taking remedial action. By planting trees and stabilizing the banks of the river, soil erosion was significantly reduced. On seeing the results, the PEI project coordinator in the environment ministry noted, "Communities can solve their environmental problems with local initiatives if people are well informed and trained because they then have a positive, proactive attitude and can see the benefits to their well-being." A project beneficiary observed: "The initiative awoke awareness among villagers on environmental protection and a better perception of how environmental degradation can affect income generation."

Source: UNDP-UNEP PEI 2008a.

Further Guidance: Sources

Countries interested in raising awareness and building partnerships can rely on several existing methodologies and tools as well as the past experiences of others.

A number of countries have been successful in using media communications and other tools to raise awareness among various audiences. These methods include policy briefs, national and regional newsletters and radio programmes.

Further guidance can be found in ***Communicating Sustainability: How to Produce Effective Public Campaigns*** (UNEP and Futerra Sustainability Communications 2005), a guide targeted at policymakers and communication specialists. Available in English, French and Spanish, the guide provides a range of tips, ideas and case studies from around the world that can be adapted to the communications needs of specific countries.

With regard to partnerships, ***The Partnering Toolbook*** (Tennyson 2003) builds on the experience of those who have been at the forefront of innovative partnerships. It offers a concise overview of the essential elements that make for effective partnering and is available in six languages.

4.4 Evaluating Institutional and Capacity Needs

To design a poverty-environment mainstreaming initiative that is rooted in national and local institutional capabilities, it is essential to evaluate institutional and capacity needs through a needs assessment. This assessment focuses attention on existing capabilities and their associated strengths and weaknesses in relation to poverty-environment mainstreaming. The objective is to take institutional and capacity needs into account in the mainstreaming initiative and ensure effective involvement of all national actors. The needs assessment should consider both the challenges at hand and those to come in later stages of the mainstreaming effort.

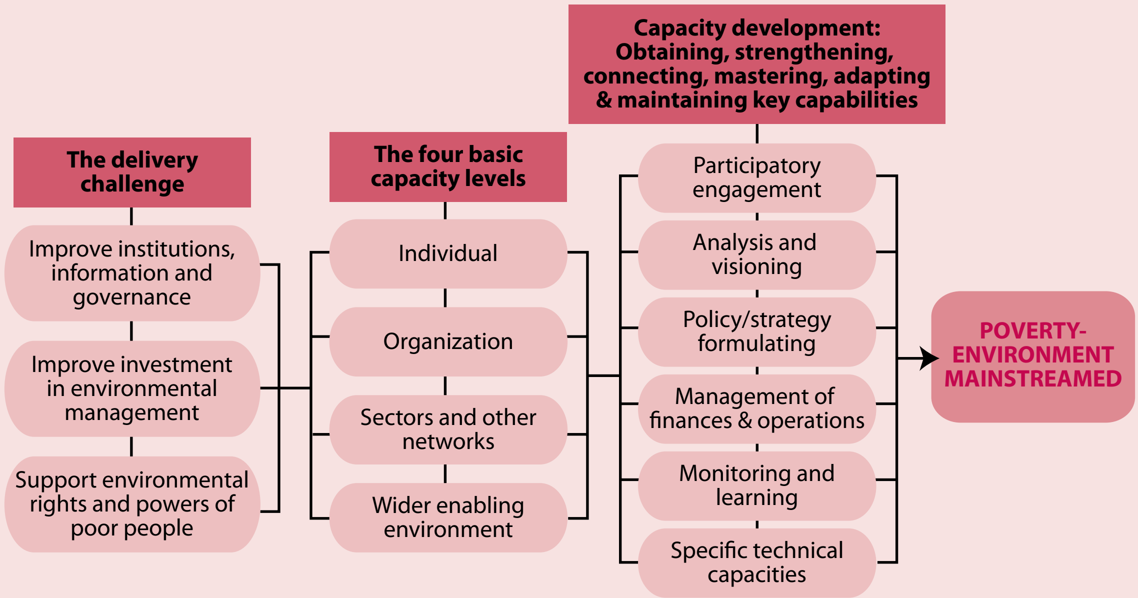
Approach

The needs assessment focuses first on identifying the level of understanding among the national actors with regard to poverty-environment linkages and evaluating the extent to which there is a basic, shared understanding to help the various governmental and non-governmental institutions form—and sustain—successful working relationships for poverty-environment mainstreaming. This shared understanding should encompass gender dimensions as well as sector-specific aspects. Based on the results, the needs assessment can then highlight options to strengthen and improve the understanding of poverty-environment issues in specific contexts. After assessing the levels of understanding of poverty-environment linkages, the evaluation should move on to examine capacities at all stages of the planning cycle.

The assessment should focus on capacities and needs at the level of organizations—notably the environment, planning, finance and key sector ministries—along with the wider institutional and societal levels, rather than the level of the individual. For example, the capacity within a country to adapt to impacts of climate change should be assessed by examining the capacities in a variety of institutions, the level of information and resources available, the political will to address the problem and the knowledge of potential risks. Institutions and capacities should also be assessed in relation to future activities of the poverty-environment mainstreaming process, including participatory engagement, analysis and visioning, policy formulation, operational management and poverty-environment monitoring. These concepts are illustrated in figure 4.2.

Initially, the needs assessment should build on the preliminary assessments of the poverty-environment linkages and the governmental, institutional and political contexts (see sections 4.1 and 4.2). It should also rely on existing institutional and capacity needs, as well as any existing environmentally focused institutional strengthening programmes, including those carried out by development actors such as the Global Environment Facility (GEF), the World Bank, the European Commission and the United Nations. Based on this initial review, additional targeted assessments may be carried out as needed, with special attention to the environment, finance and planning bodies. Poverty-environment champions can opt for a self-assessment, which may or may not be independently facilitated, or seek external support to assess their institutional and capacity needs from organizations that specialize in this area.

Figure 4.2 Dimensions of Capacity Development



Source: Steve Bass, Senior Fellow, International Institute for Environment and Development 2008.

Further Guidance: Sources

A number of methodologies and tools have proven to be effective in assessing institution-level capacity and can be used as sources in designing an assessment to best suit the country.

- **The UNDP *Capacity Assessment Methodology User's Guide*** provides interested practitioners with an overview of UNDP's approach to capacity development and capacity assessment and step-by-step guidance for conducting a capacity assessment using UNDP's Capacity Assessment Framework and Supporting Tool (UNDP 2007).
- **The *Resource Kit for National Capacity Self-Assessment*** introduces a step-by-step approach for national teams to conduct their national capacity self-assessment using a variety of tools. It was developed to assist project teams that are undertaking national capacity self-assessments with support from the GEF, but is of wider utility. The kit provides a framework of possible steps, tasks and tools that countries can adapt to fit their own priorities and resources (GEF Global Support Programme 2005).
- **The Organisation for Economic Co-operation and Development (OECD) Task Team on Governance and Capacity Development for Natural Resources and Environmental Management** is developing a new methodology for capacity assessments. This tool will identify several parameters for evaluating the capacity of governmental bodies to carry out core tasks of environmental management, including political, legal and organizational preconditions; capacity for problem analysis and evidence-based policymaking; capacity for strategic planning and law-making; capacity for policy implementation; capacity for facilitating cooperation and public participation; capacity for delivering services and managing environmental infrastructure; and capacity for performing administrative functions (OECD 2008b).

4.5 Setting Up Working Mechanisms for Sustained Mainstreaming

The objective of this activity is to enable the environmental institutions and the finance and planning ministries to engage effectively with each other and with key sector ministries, subnational bodies, non-governmental actors and the development community.

Approach

This activity involves clarifying the roles and responsibilities of the various government institutions and actors, and defining institutional and management arrangements for continuation of the effort.

Institutional Arrangements at Political and Technical Levels

The concerned government actors should first define the institutional arrangements needed to carry out a poverty-environment mainstreaming effort and decide which institution(s) will lead the initiative. In general, the ministry of planning or finance is the most suitable entity to lead the effort, in close collaboration with environmental institutions.

The government can also establish a **steering committee**—including high-level representatives from the environmental institutions, planning and finance ministries, sector ministries, subnational bodies and non-governmental actors—to provide strategic and political guidance to the process. This function could be attached to an existing mechanism, such as an environmental sector working group or equivalent. One drawback to this approach is the fact that existing bodies may be more narrowly focused and fail to represent the broader, participatory approaches that characterize current practice in poverty-environment mainstreaming.

At the technical level, the government can establish a **technical committee or task team** responsible for carrying out the activities and tasks involved in a poverty-environment mainstreaming effort. The operational modalities (frequency of meetings, terms of

Example: Non-Governmental Actors Involved in Committees and Working Groups

Argentina. The country embarked on a process to develop a sustainable consumption and production plan, which was to form the basis for the mainstreaming of this issue. Initially, three working groups from government, industry and NGOs and academia were established to help identify the priority areas. From these working groups, an advisory committee was established to guide the development and implementation of the plan within the country. Later, the advisory committee was institutionalized by a resolution signed by the Ministry of the Environment; Argentina has since established a Sustainable Consumption and Production Division under that ministry.

Mauritius. When developing its national sustainable consumption and production programme, Mauritius recognized the important role of the media in promoting environmental management. Journalists who regularly cover environment issues in the two most popular newspapers in Mauritius were made part of the advisory committees or working groups during the establishment of the programme. Their inclusion has resulted in the journalists publishing regularly on the subject, thus contributing to raising the profile of the issue in the country. The press has also been extensively engaged in the promotion of pilot activities.

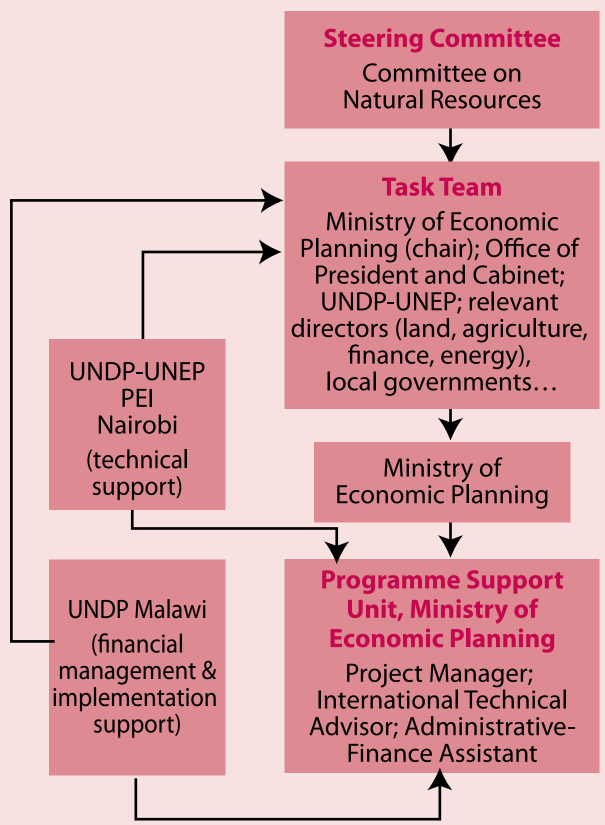
reference, composition, incentives for participation) for this committee or team should be clearly defined from the outset.

The committees can then put in place working arrangements for how they will contribute to the national development planning process, such as thematic working groups, stakeholder meetings, donor coordination mechanisms, preparation of working papers or policy briefs, or liaison with the drafting team of a national development policy or strategy.

Management Framework

The government, in close collaboration with development actors, should design a common management framework (see figure 4.3 for an example from Malawi). This can include an agreement on the lead governmental institution(s), human resources to be devoted to the mainstreaming effort (e.g. person in charge, team to establish) and financial arrangements (e.g. budget, accountability mechanisms, sources of funds). Other relevant arrangements, reporting, monitoring and evaluation, and access to technical assistance, may also be specified in the management framework.

Figure 4.3 Programme Management Structure of the Malawi Poverty-Environment Initiative



Source: UNDP-UNEP PEI Malawi 2008.

It is essential to allocate sufficient human resources for the day-to-day implementation of the mainstreaming effort. Experience has shown that a successful mainstreaming initiative often requires a three-person team based in the lead governmental institution(s)—consisting of a manager or coordinator, a technical adviser (international or national) and an administrative assistant—who are dedicated to the effort on a full-time basis.

These various working mechanisms help complement or strengthen the current institutions and capacities and the related processes. Later in the mainstreaming effort, lessons can be drawn upon in order to establish poverty-environment mainstreaming as standard practice in government and institutional processes, practices, procedures and systems (see section 6.4).

Workplan

The lead governmental institution(s) and its partners should jointly review and discuss key findings of the assessments and activities carried out earlier and their implications for the national poverty-environment mainstreaming effort. They should agree on pro-poor environmental outcomes and entry points and on the outputs, activities, responsibilities, timetable and budget for the remainder of the effort. The resulting workplan should take stock of existing efforts in the field of poverty-environment mainstreaming in the country and possible partners and reflect priority environmental and development issues, including poverty reduction, income generation and sustainable growth.

Further Guidance: Questions

The institutional and management arrangements established largely depend on national circumstances, including the governmental, institutional and political contexts, the stakeholders and the sources of funds. The answers to the guiding questions for assessing the governmental, institutional and political contexts set forth in box 4.5 should help frame these arrangements. In addition, the lead governmental institution(s) should answer the questions listed in box 4.7.

Box 4.7 Guiding Questions for Setting Up Working Mechanisms

Institutional Arrangements

- Are the **existing institutional and working arrangements** of national development planning processes adequate for the tasks of poverty-environment mainstreaming (e.g. working groups, consultations, development assistance coordination mechanisms)? Is there a need to further develop, complement or improve working arrangements for that purpose? How? For example, who should be part of a steering or technical committee for poverty-environment mainstreaming, and what should be the operational modalities of such a committee?
- Is there a need to help **mobilize additional actors** beyond those currently involved in the national development planning process? Which ones?
- What **new arrangements** are needed to contribute to and influence national development planning processes (e.g. thematic working groups, stakeholder meetings, development assistance coordination mechanisms, preparation of working papers or policy briefs, liaison with the drafting team of a national development paper or strategy)?

Management Framework

- Which **government institution(s) will lead** the effort? Who is responsible? How will the work be organized and coordinated on a daily basis?
- What are the **management arrangements** needed to successfully carry out a sustained poverty-environment mainstreaming effort (e.g. human resources, finance and resource mobilization, monitoring and evaluation)?

Workplan

- What are the **pro-poor environmental outcomes** and environmental and development issues on which to focus?
- What are the **entry points, outputs and activities**? Who is responsible for each activity? What is the **time frame**?
- What is the **budget**?

Table 4.2 Summary: What Does "Finding the Entry Points and Making the Case" Encompass?

Achievement	Examples
Overall awareness and common understanding of poverty-environment linkages	• Contribution of environmental sectors (e.g. forestry, fisheries and tourism) to economic growth • Sectoral poverty-environment linkages analysis (see, for example, Borchers and Annecke 2005) • Level of income of the poor directly related to the environment
Overall and common understanding of the governmental, institutional and political contexts	• Governmental, institutional and political mapping or report (see, for example, UNDP-UNEP PEI Rwanda 2006b)
Entry points into the planning process	• PRSP • National energy policy • Public expenditure review
Consensus and ownership of the poverty-environment effort	• Ministry of planning taking a lead role in the poverty-environment mainstreaming effort
Positioning of the poverty-environment effort within related initiatives	• Poverty-environment effort supported by existing in-country donor programmes
Initiation of collaboration and partnerships at the country level	• Inter-ministerial task team responsible for carrying out the activities and tasks involved in a poverty-environment mainstreaming effort
Poverty-environment champions	• Head of state's office • Permanent secretaries of sector ministries
Overall understanding of institutional and capacity needs	• Capacity self-assessment report
Institutional and management arrangements for a mainstreaming initiative	• Human and financial resources allocated to the effort
Involvement of stakeholders and development community	• Poverty-environment mainstreaming part of the donor coordination group's agenda

Chapter 5

Mainstreaming Poverty-Environment Linkages into Policy Processes

Coverage

- Explains how to collect country-specific evidence through integrated ecosystem assessments and economic analyses (sections 5.1 and 5.2)
- Describes how poverty-environment issues can be integrated into a policy process focusing on an identified entry point (section 5.3)
- Highlights the development and costing of related policy measures (section 5.4)
- Summarizes elements related to institutional and capacity strengthening (section 5.5)

Key Messages

- Use country-specific evidence to identify priorities and develop arguments to engage effectively in the policy process
- Adapt to the timing and modalities of the policy process and engage with sector working groups, donors and other stakeholders
- Make sure the resulting policy document includes goals and targets based on poverty-environment linkages and implementation strategies that support those targets
- Develop and cost policy measures deriving from policy documents to influence the budgeting process
- Strengthen institutions and capacities through tactical capacity-building and on-the-job learning throughout the effort

5.1 Using Integrated Ecosystem Assessments to Collect Country-Specific Evidence

Integrated ecosystem assessments act as a bridge between science and policy by providing scientific information on the consequences of ecosystem change for human well-being in a form directly relevant for policymaking and implementation.

Policy relevance is achieved by ensuring that the scope and focus of an integrated ecosystem assessment are defined in close consultation with relevant policymakers. Scientific credibility is ensured by involving the best scientists from a range of disciplines and subjecting the assessment findings to rigorous review.

Box 5.1 further explains why integrated ecosystem assessments are useful.

Box 5.1 Why the Need for Integrated Ecosystem Assessments?

Integrated ecosystem assessments can perform the following useful functions:

- Identify **priorities** for action and analyse **trade-offs**, showing how gains in some services may be achieved at the expense of losses in others
- Provide foresight concerning the likely **consequences of decisions** affecting ecosystems
- Identify **response options** to achieve human development and sustainability goals
- Provide a **framework** and source of tools for assessment, planning and management
- Act as a **benchmark** for future assessments and guide future research

Source: UNEP and UNU 2006.

Approach

The Millennium Ecosystem Assessment offers a framework for demonstrating connections between ecosystem services and human well-being, and for quantifying their value in monetary terms where possible. Armed with hard data on the worth of a forest, a wetland or a watershed, for example, policymakers can better design policies and practices that reflect the full value of nature and its services (MA 2007).

The most complete approach to integrated ecosystem assessment is based on the Millennium Ecosystem Assessment's generic methodology for conducting multiscale assessments. Key steps include the following:

- **Assessment of conditions and trends in ecosystems and their services.** This entails the analysis of condition, geographical distribution and trends in the supply of and demand for ecosystem services; the capacity of ecosystems to supply these services; and the impacts of changes in ecosystems on the delivery of services.
- **Development of future scenarios.** Plausible scenarios for the future of the assessment area provide qualitative narrative storylines supported by quantitative models to illustrate the consequences of various plausible changes in driving forces, ecosystem services and human well-being.
- **Consideration of response options.** Past and current actions are evaluated in order to generate a range of practical options and choices for improved management of ecosystems for human well-being and pro-poor economic growth.

A number of key principles from the Millennium Ecosystem Assessment framework and in-country experience should shape the design of integrated ecosystem assessments.

- **People-focused.** While the Millennium Ecosystem Assessment recognizes that ecosystems have intrinsic value, it focuses on maximizing human well-being now and over time. The assessment is concerned with the distributional impacts for different groups of people (e.g. of different age, sex and geographical location) and shows that a dynamic interaction exists between people and ecosystems. The human condition drives change in ecosystems, and changes in ecosystems cause changes in human well-being. Box 5.2 presents examples of ecosystems and their services affected by human-caused climate change.

Box 5.2 How Does Climate Change Affect Ecosystem Services?

Ecosystems and services affected by climate change include the following:

- **Marine and coastal ecosystems:** fisheries, climate regulation, storm/flood protection, transportation, freshwater and nutrient cycling, tourism, cultural value
- **Forest and woodlands:** pollination, food, timber, water regulation, erosion control, medicines, tourism, cultural value
- **Drylands:** soil conservation of moisture, nutrient cycling, food, fibre, pollination, freshwater, water and climate regulation, tourism, cultural value
- **Mountain ecosystems:** freshwater, food, medicinal plants, natural hazard and climate regulation, rangeland for animals, tourism, cultural value
- **Cultivated ecosystems:** food, fibre, fuel, pollination, nutrient cycling, pest regulation, freshwater

Source: WRI 2008.

- **Integrated.** An integrated ecosystem assessment includes environmental, social and economic analyses of both the current state of ecosystem services and their future potential. It provides information about a range of factors, how they interact to influence the ecosystem and how an entire array of ecosystem services is affected by changes in the ecosystem.
- **Multidisciplinary.** An integrated ecosystem assessment is best carried out by an interdisciplinary team of experts, including environmental experts, sociologists, gender experts, economists and political scientists. These professionals may have different views and understandings of the interactions between ecosystems and human well-being, thus strengthening the overall assessment and its results.
- **Participatory.** An integrated ecosystem assessment is best undertaken through a participatory approach, in close collaboration with decision-makers and actors whose work is influenced by the outcomes of the assessment. The selection of issues and the kinds of knowledge incorporated in the assessment may tend to favour some stakeholders at the expense of others. The utility of an assessment is thus enhanced by identifying and addressing any structural biases in its design.
- **Knowledge-based.** Effective incorporation of different types of knowledge in an assessment can both improve the findings and help increase their adoption by stakeholders, who can bring important knowledge about the physical assessment area and its context (e.g. indigenous people, marginalized communities, women).

- **Multiscale.** Efforts should focus on both spatial and temporal scales that encompass the natural processes associated with the problem considered and include the actors that can affect change at that scale. The fundamental unit of interest is the ecosystem itself (e.g. watershed, wilderness, migratory route). Site-specific information cannot always be aggregated to analyse national or global trends. However, undertaking assessments at multiple spatial scales, ranging from the local level to the national or regional level, provides insights on wider trends and processes. In respect to the temporal dimension, climate change projections and scenarios (box 5.3) can be used to inform the assessment.

Box 5.3 Climate Change Modelling

The development community has been working for a long time on climate change projections and scenario-building. Some of the major climate scenario models being used are the Global Climate Model, the Statistical DownScaling Model, the PRECIS (Providing Regional Climates for Impacts Studies) Regional Climate Modelling System and the MAGICC/SCENGEN (Model for the Assessment of Greenhouse-Gas Induced Climate Change/Regional Climate Scenario Generator).

Much of the community's effort has been aimed at strengthening institutions and capacities. For instance, the UK Meteorological Office has been conducting targeted training on climate change modelling for developing countries. Strengthening institutions and capacities for climate change modelling informs integrated ecosystem assessments with climate scenarios and supports sustained poverty-environment mainstreaming with scientific knowledge.

- **Policy-relevant.** The geographic area covered in the assessment should be carefully identified. It should be an area of importance for the policymakers involved in the mainstreaming process. To obtain the most accurate results from an integrated ecosystem assessment, the area chosen should be one for which significant information and data are already available. The assessment's main function is to synthesize existing information by combining different sources of data—formal or informal, qualitative or quantitative. Finally, budget constraints can also limit the area of assessment.
- **Timely.** Because the integrated ecosystem assessment will provide country-specific evidence that can be used for advocacy, raising awareness and convincing policymakers of the importance of sustainable environmental management, the assessment should precede the development and implementation of the policy process the mainstreaming effort is attempting to influence (see section 5.3). However, the information generated through assessment can be used at any time to influence ongoing or future planning processes (e.g. policy process, budget process or subnational planning process).

Further Guidance: Sources and Example

An integrated ecosystem assessment synthesizes existing information. A logical starting point is the existing literature, including peer-reviewed, scientific and semi-scientific works. Databases held by government departments or research institutes such as the World Agroforestry Centre and the Consultative Group on International Agricultural Research are a repository for much unpublished information. However, given the many information gaps regarding ecosystem services and linkages to human well-being, it is often necessary to collect new field data, make use of models and tap local knowledge. Gender analysis frameworks, which provide step-by-step tools to analyse activity, access and control profiles of men and women, can be useful in collecting new and analysing existing data. For more guidance, practitioners can refer to the following resources:

- *Ecosystems and Human Well-Being: Conducting and Using Integrated Assessments – A Training Manual* (UNEP and UNU 2006), available in English, French and Portuguese
- *The Millennium Ecosystem Assessment: A Toolkit for Understanding and Action* (MA 2007)
- *Ecosystems and Human Well-Being: Synthesis* (MA 2005)
- *Ecosystem Services: A Guide for Decision Makers* (WRI 2008)
- *The Millennium Assessment Manual* (UNEP-WCMC, forthcoming 2009).

Box 5.4 illustrates the integrated ecosystem assessment approach as used in Trinidad and Tobago.

Box 5.4 Assessment of the Northern Range, Trinidad and Tobago

Background. The Northern Range is a complex ecosystem covering approximately 25 per cent of Trinidad's land area. Its catchment areas are the most significant contributors to the island's freshwater supply and help control flooding in the low-lying foothill regions. The range provides vital space for housing and agriculture; is important for ecotourism and recreation; provides opportunities for small-scale freshwater and coastal/marine fishing; affords safe harbours; contributes to local climate regulation; and provides other economic activities through timber harvesting, wildlife hunting and the manufacture of goods from non-timber forest products.

Drivers of change. Among the many drivers of ecosystem change in the Northern Range are urbanization, upgrade of housing, slash and burn and other unsustainable agricultural and land-clearing practices, and increased demand for recreational activities. Increasing variability in weather patterns drives change in run-off regulation services. Unregulated mining, agriculture and forestry have all contributed to the range's decline. Other threats are forest fires, increased unsustainable land use for recreational purposes and poor zoning and policy. On the island as a whole, freshwater resources are threatened by deforestation and pollution. A faulty water distribution infrastructure is responsible for losses of 50–60 per cent of the water supply before it reaches consumers.

Assessment approach. The assessment relied on published scientific literature, supplemented by professional input and community perspectives. It was organized into three components, examining forest, freshwater and coastal resources. Biodiversity and land use were evaluated as cross-cutting themes in all of the subsystems. The amenity value of the subsystems was considered throughout the assessment and at multiple scales.

Response options. Projections indicate that conversion, degradation and decline in ecosystem services will continue unless appropriate policy measures are implemented to check the driving forces of ecosystem change. The assessment recommended review and implementation of existing policies and development of new policies for sustainable management, including the following:

- Zoning of the eastern section of the Northern Range for conservation purposes
- Revised contour and slope limits for housing construction in the western section
- Local-area physical development plans compatible with the overall plan for the Northern Range
- Executive and legislative action proposals on environmentally sensitive areas and species
- User fees and fines for non-compliance for income generation for specific amenity sites
- Multilateral, multi-stakeholder decision-making processes
- Encouragement of monitoring, evaluation and academic research in the region

Source: Environmental Management Authority of Trinidad and Tobago 2005.

5.2 Using Economic Analyses to Collect Country-Specific Evidence

The purpose of this activity is to demonstrate—through economic analysis—the importance of the environment for pro-poor economic growth, human well-being and achievement of the MDGs in order to influence policy and budgeting processes.

Economic arguments are among the most powerful in convincing decision-makers of the importance of environmental sustainability for achieving development priorities. Economic analyses quantify the contribution of the environment to a country's economy through revenues, job creation and direct and indirect use of resources by the population. By demonstrating the multiple values of the environment, expressed both in monetary and broader non-monetary terms, economic analysis can help persuade decision-makers that sustainable management of the environment will help them meet development goals.

Approach

The contribution of the environment can be shown both by interpreting existing data in new ways (e.g. why watershed and catchment management matters for hydropower) and by collecting and analysing new data (e.g. dependence of poor households on natural resources; costs of climate change-related impacts). Formal market values of natural resources can be highlighted (such as the value of fisheries or sustainable products to certain countries), along with informal market values (such as the importance of bush meat to local economies in parts of Africa).

Special efforts should be made to demonstrate the economic significance of ecosystem services that do not flow through markets, such as the value of coastal vegetation in preventing floods from storms. Economic techniques can be used to estimate these so-called non-market values, thus shedding light on the "invisible" value of ecosystem services and the costs related to their degradation.

It can be useful to link environmental factors to familiar economic indicators used by decision-makers, such as gross domestic product (GDP), export income and mortality and morbidity data on health impacts. Once these relationships are demonstrated, they can help justify decisions about integrating poverty-environment linkages in policy-making and budgeting.

Key Economic Indicators and Their Poverty-Environment Linkages

The linkages between poverty, the environment and key economic and human well-being indicators can be demonstrated at various levels.

- **GDP and GDP growth.** Expressing the contribution of the environment to the national economy in terms of GDP can be accomplished using informal data to show the true value of natural resources, as well as more sophisticated approaches that account for the value of environmental damages and natural resource depletion in calculating the genuine savings of an economy (i.e., subtracting these values from its gross savings) (Hamilton 2000). For example, logging provides immediate revenue, but if carried out on an unsustainable basis, revenue streams will be reduced and eventually cease due to the depletion of the country's forest resources. In addition, costs of environmental degradation approaches have helped make the case for sustainable natural resource management in the Middle East and North Africa (Sarraf 2004), Ghana (World Bank 2007a), Nigeria (DFID 2004b) and elsewhere.

Examples: The Environment and GDP

- In **Cambodia**, fisheries generate 10 per cent of GDP (ADB 2000).
- In **Ghana**, the national costs of environmental degradation are estimated at 9.6 per-cent of GDP (World Bank 2007a).
- In **Tunisia**, the gross cost of environmental damage is equivalent to 2.7 per cent of GDP, while in Egypt, this cost amounts to 5.4 per cent of GDP (Sarraf 2004).
- In **West Africa**, fisheries can represent up to 15–17 per cent of national GDP and up to 25–30 per cent of export revenues (OECD 2008a).

- **Macroeconomic indicators of production.** The contribution of the environment to the national economy can also be expressed through macroeconomic indicators of production—for example, by demonstrating the level of exports from environment-related sectors such as tourism.
- **Employment.** Demonstrating the number of jobs generated by certain environmentally based activities is another way to use economic arguments. Many economic activities that rely on natural resources are informal, part time, seasonal or subsistence based. As such, these sources of employment are consistently underestimated in national economic data and may not even appear in many more formal estimates of employment.

Examples: The Environment and Employment

- In **Brazil**, the most recent agricultural census showed that one rural job is created for every 8 hectares cultivated by small farmers, whereas large-scale mechanized farms provide only one job for every 67 hectares, on average. In Brazil, employment in biofuels or biomass is estimated at half a million jobs (Renner, Sweeney and Kubit 2008).
- In **China**, employment in solar thermal and biofuels/biomass is estimated to account for 600,000 and 226,000 jobs, respectively (Renner, Sweeney and Kubit 2008).
- In **India**, replacing traditional cooking stoves with advanced biomass cooking technologies in 9 million households could create 150,000 jobs, not including jobs generated in biomass collection and biomass plantations. In New Delhi, the introduction by 2009 of 6,100 buses powered by compressed natural gas is expected to create 18,000 new jobs (Renner, Sweeney and Kubit 2008).
- Some 23 per cent of the more than 130,000 rural households in **Papua New Guinea** earn their income from fishing. In the Pacific Islands, large numbers of women gain economic benefits from fishing either directly or indirectly by working in related jobs such as selling fish, exporting and marketing (ADB 2001).

- **Public revenues.** Natural resources are a major source of wealth and, if properly managed, can generate significant tax revenues in low-income countries. Unfortunately, the revenue potential may remain unrealized due to poor market incentives, inadequate subsidies for natural resource extraction (e.g. low-cost loans for Indonesia's timber industry), artificially low taxes on natural resource use, lack of enforcement (e.g.

tax evasion on legal or illegal harvests) or conflicting policies. Hence, improved environmental management can be an important source of additional government revenues, which can be directed toward poverty reduction along with other sources of revenues (see section 6.2).

- **Public expenditures.** The loss of ecosystem services or natural resources may translate into the need for additional public expenditures. Often, the loss of natural resources is treated as having limited impacts, since many of these impacts are not fully priced in the market. Using economic techniques to quantify these non-market values can demonstrate the need for improved environmental management (box 5.5). Various techniques—such as cost-benefit analysis, cost-effectiveness analysis and rate of return—can be used to evaluate potential investments and identify the best ones (see section 5.4).

Box 5.5 Examples of the High Benefit-Cost Ratio of Public Expenditure on the Environment

Benin. Investments in a biological control programme undertaken in the early 1990s to block the proliferation of water hyacinth, an invasive, exotic (non-native) plant, have reaped major rewards. At the peak of the infestation, the livelihoods of some 200,000 people had been affected, with a reduction in income from fishing and trade estimated at $84 million annually (SIWI 2005). The control programme, and the resulting decline in environmental damage from water hyacinth, is credited with a yearly increase in income of more than $30 million. With programme costs of just over $2 million (net present value), the benefit-cost ratio of the investment was enormous (NORAD 2007).

Indonesia. A study analysing the benefits and costs of reef conservation compared to existing practice in Indonesia indicates a considerable rate of return to conservation, ranging from 1.5 to more than 50, depending on the intervention (Cesar 1996).

Madagascar. Investment in a new management regime to address overexploitation of shrimp fisheries in Madagascar has paid handsome dividends. A new programme of long-term, tradable licences was established in 2000 and appears to be working. The benefit-cost ratio of this intervention has been estimated at 1.5 (Rojat, Rojaosafara and Chaboud 2004).

Sri Lanka. Economic analysis has demonstrated that the value of investing in protection of the Muthurajawala wetland north of the capital city of Colombo exceeds $8 million per year, or about $2,600 per hectare per year. Flood attenuation accounts for two-thirds of these benefits, with the remaining gains consisting of industrial wastewater treatment (22 per cent); benefits to agricultural production and downstream fisheries (7 per cent); and benefits from firewood, fishing, leisure, recreation, domestic sewage treatment and freshwater supplies (4 per cent). More than 30,000 people—mostly poor slum dwellers and fishing households—benefit from these services (Emerton and Bos 2004).

Uganda. The Nakivubo swamp, near the capital city of Kampala, provides various ecosystem services, including wastewater purification and nutrient retention. Economic valuation studies indicate that the value of these services totals some $1 million to $1.75 million per year, with annual costs of maintaining the wetland's capacity to provide these services of only $235,000. Thus, investments that secure these wetland services are highly profitable, saving the government considerable costs in alternative waste and water pollution mitigation investments and providing a strong argument against further drainage of this valuable wetland (Emerton and Bos 2004).

- **Livelihoods of poor people.** There is growing evidence that poor households rely disproportionately on natural resources to earn their livelihoods. Women are especially dependent on natural resources for income and subsistence. Household income surveys are routinely conducted by countries to derive their poverty lines and can provide a very robust source of data and information on the linkages between poverty and environment. For example, it is useful to know how much time is spent by households, women and men in collecting firewood and water.

Examples: Contribution of the Environment to Livelihoods

- In **India**, natural resources provide up to $5 billion a year to poor households—or double the amount of aid that India receives (Beck and Nesmith 2001).
- It is estimated that more than 1 billion **people in poor countries** depend on forests for their livelihoods (IUCN 2007).
- Over 90 per cent of the **people living in extreme poverty** depend on forests for some part of their livelihoods. However, global forest cover has declined by at least 20 per cent since pre-agricultural times (World Bank 2004b; UNDP et al. 2000).

- **Health of poor people.** Environmental factors such as waterborne disease and indoor air pollution—some of which may be exacerbated by climate change—are a major contributor to the deaths of millions of children each year and play a leading role in damage to maternal health. Quantifying the environmental burden of disease—that is, the amount of disease caused by environmental risks—should be an integral aspect of poverty-environment mainstreaming. Using the disability-adjusted life years index, which combines the burdens due to death and disability in a single index, permits comparison of the health impacts of various environmental and non-environmental risk factors (Prüss-Üstün and Corvalan 2006). It also enables the environmental burden of diseases to be expressed in monetary terms, such as the total costs to the national economy of lost productivity, additional medical treatment and so forth.
- **Resilience of poor people to environmental risks and climate change.** Climate and weather have powerful direct and indirect impacts on human life and livelihoods, and extremes of weather such as heavy rains, floods and hurricanes can have severe impacts. Changing climatic conditions also affect people's means of subsistence, such as livestock, crops and access to basic services, as well as affecting diseases transmitted through water and via vectors such as mosquitoes (Prüss-Üstün and Corvalan 2006). Quantifying the value of the environment in monetary and

Examples: Environmental Risks

- Approximately 600,000 deaths occurred **worldwide** as a result of weather-related natural disasters in the 1990s. Some 95 per cent of these were in poor countries.
- In **Europe**, abnormally high temperatures in the summer of 2003 were associated with more than 35,000 excess deaths relative to previous years.
- In **Venezuela**, floods in and around Caracas in December 1999 killed approximately 30,000 people, many in shanty towns on exposed slopes.

Source: Prüss-Üstün and Corvalan 2006.

non-monetary terms with respect to resilience to climate and other risks can help convince decision-makers of the importance of poverty-environment mainstreaming (e.g. impact on health, agriculture, damage to infrastructure), as illustrated in box 5.6.

Box 5.6 Estimating the Value of Coastal Protection Services Provided by Mangrove Ecosystems: An Example from Orissa, India

Professor Saudamini Das of the University of Delhi has studied the role of mangroves in providing protection against deaths and destruction caused by cyclones. She has concluded that if all of the mangrove forests existing in 1950 had been intact during the super cyclone that hit the Indian state of Orissa in October 1995, some 92 per cent of the almost 10,000 human fatalities could have been prevented. Moreover, without the present mangroves, the death toll from the 1995 storm might have been 54 per cent higher.

Professor Das estimated that the economic value of these protection services during the super cyclone was about 1.8 million rupees ($43,000) per hectare. Accounting for the probability of very severe storms in Orissa over the last three decades, she calculated the value of a hectare of land with intact mangrove forests to be about 360,000 rupees ($8,600), while a hectare of land after mangroves are cleared sells at 200,000 rupees ($5,000) in the market. The cost of regenerating 1 hectare of mangrove forest is approximately 4,500 rupees ($110), whereas the cost of constructing a cyclone shelter in the state of Orissa is 3.0 million rupees ($71,000).

Source: SANDEE 2007.

Key Principles

The approach to conducting economic analyses with a view to convincing decision-makers of the importance of mainstreaming poverty-environment linkages is informed by several key principles, drawn from skills and experience in both economic and environmental analysis.

- **Start from the process to be influenced and economic indicators to be assessed.** The starting point must be a thorough understanding of the process to be influenced. This requires economists who understand the growth process, public finance and employment—and how the environment can be linked to these. Often, simple approaches can be used, drawing on existing data and information such as participatory poverty assessments, public expenditure reviews and tax receipts.
- **Involve decision-makers and experts from different disciplines.** Setting up multidisciplinary teams—including economists, environmentalists, gender experts, policy specialists and women and men from local communities—is recommended.
- **Use broadly familiar tools.** Success is more likely using tools that build on those that are already broadly familiar to decision-makers involved in national development planning, such as household poverty assessments, economic valuation, cost-benefit analysis or cost-effectiveness analysis. Generally speaking, simpler models are preferable to more complex ones, at least until more basic analysis has been carried out.

- **Make sure that uses of the environment are sustainable.** Some analysis assumes that existing or planned uses of the environment are sustainable—for example, that people who benefit from forest products are not damaging the forest, or that illegal loggers can be taxed at the level of their current harvest. This is often a mistaken assumption. Care should be taken to ensure that the analysis is based on truly sustainable use of ecosystem services.
- **Do not overstate positive poverty-environment linkages.** While the value of positive poverty-environment linkages is often underappreciated, their significance should also not be exaggerated. Poverty-environment linkages are complex, and simple cause-and-effect relationships are rare. Sometimes there are obvious synergies, but often trade-offs are more realistic outcomes. In some situations, dependence on degraded natural resources can be a poverty trap for poor people. In these cases, the best response may be measures that reduce this dependence, such as support for migration along with assistance for those left behind. This is in the interest of poor people, and overstating claims for the environment can be counterproductive.
- **Include the full complexity of the linkages between the environment and economics.** Linkages are complex and vary over time. Impacts can be positive and negative, short term and long term, macro and micro. For example, in carrying out economic analyses, it is important to capture the full depth of economic benefits achieved or foregone. Although measuring immediate impacts is the first priority, subsequent impacts (sometimes referred to as second- and third-order impacts) should also be taken into account.

Example: Subsequent Impacts of Deforestation

Reduced availability of fuelwood is an immediate impact of deforestation. This shortage may lead to a decrease in school attendance by girls, who are required to work longer hours and travel farther from home to help fetch firewood. It may also worsen child illness and malnutrition if households respond by reducing the time spent boiling water and cooking food, which results in unsafe water and a less nutritious diet.

- **Consider spatial presentation of the results.** Data disaggregated at the subnational level can be usefully presented as maps spatially linking the socio-economic situation and the state of the environment and the ecosystems. Such information can then be used to better define the policy goals and targets; inform the development, costing and prioritization of policy measures; influence the budgeting process; and monitor the implementation of the measures. Although maps highlighting poverty-environment linkages have seldom been used, the results of poverty maps suggest interesting prospects for such tools in influencing national development planning. For example, Nicaragua's Strengthened Growth and Poverty Reduction Strategy relied heavily on poverty maps to allocate $1.1 billion in capital spending over five years (Henninger and Snel 2002).

Further Guidance: Steps

Within the context of a poverty-environment mainstreaming initiative, a step-by-step approach to economic analysis can be useful (table 5.1).

Table 5.1 Main Steps in Defining and Using Country-Specific Economic Evidence

Step	Recommended actions for poverty-environment mainstreaming
1. Define the objectives of the analysis	• Define a hypothesis and clear objectives for the analysis • Identify expected outcomes and determine how to use results to influence the policy or budgeting process
2. Define the scope and timing of the analysis	• Focus on how sustainable use of the environment will contribute to the achievement of development priorities; for example, if food security is a priority, the economic analysis should highlight how environmentally sustainable agriculture can help achieve food security • Ensure that the analysis takes informal markets into account • Ensure that gender considerations are included • Be timely; timing is critical since the analysis is meant to influence a policy or budgeting process
3. Determine the approach	• Determine appropriate approaches based on the objective and scope of the analysis and availability of resources (e.g. ecosystem analysis, cost-benefit approach, economic valuation, life cycle analysis or case studies)
4. Design the analysis	• Take stock of existing data and literature to identify information gaps and collect missing information if needed (e.g. through field survey, interviews or case studies) • Determine overall value or benefits of natural resources in relation to national priorities (e.g. economic growth, GDP, employment, exports, household income, poverty reduction) • Assess the trends and changes to natural resources over time under different use scenarios for specific sectors (e.g. agriculture, forestry, water) • Measure the costs of environmental degradation under these different scenarios • Estimate the costs of the policy measures required to improve or maintain the natural resources and the benefits they bring • Analyse benefits and costs for different sectors, scenarios, policy measures and natural resources, expressed in relation to national priorities
5. Carry out the analysis	• Set up multidisciplinary teams to conduct studies; ensure the involvement of various stakeholders (e.g. in terms of gender, socio-economic status, location) • Use the economic analysis process as a tool to strengthen institutions and capacities (e.g. government, research institutes and civil society) to undertake economic analyses and maintain the ownership of the study and its results; examples of capacity-building approaches include the following: – Twinning approach (cooperation between national organizations and their equivalent in other countries or international institutions) – Formal training and on-the-job learning (see section 5.5)
6. Develop arguments and convey the messages	• Identify key messages and establish convincing arguments • Determine the best way (in terms of format, timing, circumstances) to present the outcomes of the study • Present a summary of evidence collected (perhaps two to four pages) and key messages that clearly explain the study's results and impact on the relevant policy process; a report that simply identifies the linkages between the environment and development priorities is insufficient • Do not wait for the complete results to present the evidence; more sophisticated evidence of linkages can be presented at a later stage

5.3 Influencing Policy Processes

The objective of this activity is to ensure optimal integration of poverty-environment issues into an overarching national or sector policy, with an eye to creating opportunities to effectively influence policy implementation—for example through the budgeting process and policy measures at the sector or subnational level (see chapter 6). In the shorter term, influencing a policy process translates into an increased awareness about the contribution of the environment to human well-being and pro-poor economic growth; improved cooperation among the finance, planning, sector and subnational bodies; and the inclusion of poverty-environment–related goals, targets and implementation strategies in policy documents.

Example: Poverty-Environment Issues in Uganda's Poverty Eradication Action Plan

The poverty-environment issues integrated in Uganda's Poverty Eradication Action Plan include the following:

- Energy, fuelwood and deforestation
- Soil erosion and stewardship in farming, agrochemicals, integrated pest management and manures
- Land tenure
- Environmental health
- Education and awareness
- Transport
- Wetlands

Source: MFPED 2004.

Approach

The approach to influencing policy processes is both process oriented and analytical. It builds on previous activities, particularly the preliminary assessments (see sections 4.1 and 4.2) and the collection of country-specific evidence (see sections 5.1 and 5.2).

Engaging with the Institutional and Policy Process

To convince policymakers to include poverty-environment linkages in their work, it is necessary to understand this work, including the related steps and procedures, and gain access to the people involved.

- **Understanding the policy context and process.** In addition to grasping the overall context and poverty-environment linkages (see sections 4.1 and 4.2), having a good sense of the targeted policy process is also critical. This includes the timetable, the road map or steps in the process, the roles of the different actors and the intended outputs. It is also important to be informed of the sector goals contributing to long-term national priorities.
- **Becoming part of the process.** Influencing a policy process requires having a "seat at the table." The earlier the engagement begins, the better the chances of influencing the outcome. Further, it is important to reach agreement among the relevant government actors (the institution

Examples: Ways to Become Part of the Process

- Having access to working groups and the drafting team to make the case for the environment
- Having access to sector and subnational institutions when preparing their contributions
- Having access to the environment working group developing the environmental content

leading the policy process and other participating sector and subnational institutions) on how poverty-environment mainstreaming fits with the timetable and road map of the targeted policy process. How the process works and how much access is agreed for poverty-environment mainstreaming will determine the scope of the mainstreaming effort and the timescale within which it can take place.

- **Responsibility and ownership of the process.** The institution leading the policy process should have responsibility for and ownership of poverty-environment mainstreaming. This means that the message would come, for example, from planning or finance bodies and not only from environmental actors. The lead institution can then make the necessary working arrangements and require the integration of poverty-environment linkages in the submissions of sector and subnational institutions.
- **Championing poverty-environment mainstreaming.** Policy processes involve numerous actors and mechanisms, such as working groups and drafting groups. Champions need to participate in each of these mechanisms and engage with influential individuals. Engagement should be both at a high, political level and at a technical level so as to convince and support the various actors to integrate poverty-environment linkages effectively into their work. Building partnerships with governmental, non-governmental and development actors can be instrumental in mobilizing more champions and ensuring successful mainstreaming (see chapter 3).

Example: Turning Senior Officials into Champions in Kenya

Two special visits to the arid northern part of Kenya by senior government and aid agency officials played a key role in converting these decision-makers, who had previously downplayed issues related to drylands, into ardent advocates of integrating the needs and concerns of the pastoral communities living in these areas into the country's poverty reduction strategy. Most of these officials, including the head of the PRSP Secretariat, had never before visited that region of the country. The visits served to increase the appreciation of treasury decision-makers of the poverty-environment dimensions of problems faced by pastoral communities and their interest in dryland issues in general. The visits were organized by the Pastoralists Thematic Group in collaboration with the PRSP Secretariat.

Source: UNDP, UNEP and GM 2007.

- **Coordination mechanisms.** Collaboration and coordination with actors concerned with other cross-cutting issues, such as gender or HIV/AIDS, are useful in creating synergies and avoiding competition. In addition, specialized bodies dealing with complex issues such as climate change need to be closely associated with the poverty-environment mainstreaming process.
- **Targeting communication.** It is important to know the target audience and the arguments most likely to convince them and to tailor messages accordingly. Effective communication requires having a clear and concise message and repeating it often (including in one-on-one meetings, presentations and participation in sector working groups). Short briefing papers targeting a specific audience, such as sector working groups, are more likely to get the message across than long reports. Media work, brief training sessions and field visits on poverty-environment issues can also form a part of this effort.

Applying Policy Analysis

A second axis of the approach consists of the tactical application of policy analysis in order to influence the policy process and increase the priority given to poverty-environment issues.

- **Adapting the analytical work to the process.** The results of country-specific evidence (see sections 5.1 and 5.2) and existing assessments or studies need to be customized for advocacy purposes or be used as contributions to the process. Further analytical work might be needed to show how integrating poverty-environment linkages contributes to the overall goals of the policy and to come up with specific targets or implementation strategies for inclusion in the policy document. In either case, the analytical work needs to be aligned with the policy process and its context. Often, it is not possible to carry out complex analyses, and simple analytical arguments or concrete examples can prove to be most effective.

  In practice, the analytical work often takes the form of **consultation with experts,** including workshops of specialists and other stakeholders to discuss the relevance of poverty-environment issues to the targeted policy process and brainstorm on appropriate goals and implementation strategies to be included in the policy document. Such consultations should build on earlier work and help in the preparation of the environment sector's submissions to the policy process.

  Given time and willingness to embark upon an approach that may be longer and more complex, interested stakeholders can carry out a **strategic environmental assessment** or make use of **integrated policymaking for sustainable development**.

  A **strategic environmental assessment** refers to a range of analytical and participatory approaches that aim to integrate environmental considerations into policies, plans and programmes and evaluate the environment's overlapping linkages with economic and social considerations (OECD 2006a). Used in the context of poverty-environment mainstreaming, the assessment can also be useful in systematic review of a policy process or document to identify possible poverty-environment contributions and refine priorities accordingly (box 5.7).

  Integrated policymaking for sustainable development is a process that incorporates the main objectives of sustainable development, economic development, poverty reduction and environmental protection into policy actions. Integrated policymaking for sustainable development goes beyond assessment and evaluation by extending to the whole process including agenda setting, policy formulation, decision-making, implementation and evaluation (UNEP 2008a). When the context allows, relevant elements of the framework can be applied to the poverty-environment mainstreaming effort.

- **Aligning the analytical approach with the policy framework.** The analytical approach needs to be aligned with the structure of the targeted policy document. For example, a policy document may be constructed around goals or pillars (e.g. sustainable growth, good governance, reduced vulnerability) or be based on priority sector programmes. The document can also include cross-cutting issues and present implementation strategies or targets.

Box 5.7 Using Strategic Environmental Assessment to Incorporate Poverty-Environment Linkages into Ghana's Poverty Reduction Strategy Processes

Background and objectives. Although Ghana's Poverty Reduction Strategy, published in February 2002, identified environmental degradation as a contributor to poverty, the strategy overall treated the environment as a sector matter only. Moreover, many of the policies put forward in the strategy relied on the use of natural resources in ways that held the potential for significant environmental damage.

The government decided to carry out a strategic environmental assessment as part of a poverty-environment mainstreaming effort for a revised Poverty Reduction Strategy. The assessment aimed to evaluate the environmental risks and opportunities associated with the strategy's policies and to identify appropriate measures to ensure that sound environmental management was the basis for pro-poor sustainable growth and poverty reduction in Ghana.

Approach. The assessment commenced in May 2003 and comprised two elements: a top-down assessment, with contributions from 23 ministries; and a bottom-up exploration at the district and regional levels. The ministries were exposed to strategic environmental assessment processes and guided on how to incorporate the environment in policy formulation.

Outcomes. Planning guidelines were revised to integrate poverty-environment linkages at the sector and district levels. Greater emphasis was placed on the use of the strategic environmental assessment to improve the processes by which policies are translated into budgets, programmes and activities. The assessment also changed the attitudes of officials responsible for planning and budgeting, encouraging them to seek win-win opportunities in integrating the environment in policies, plans and programmes. The 2006–2009 Poverty Reduction Strategy was drafted with direct input from the assessment team.

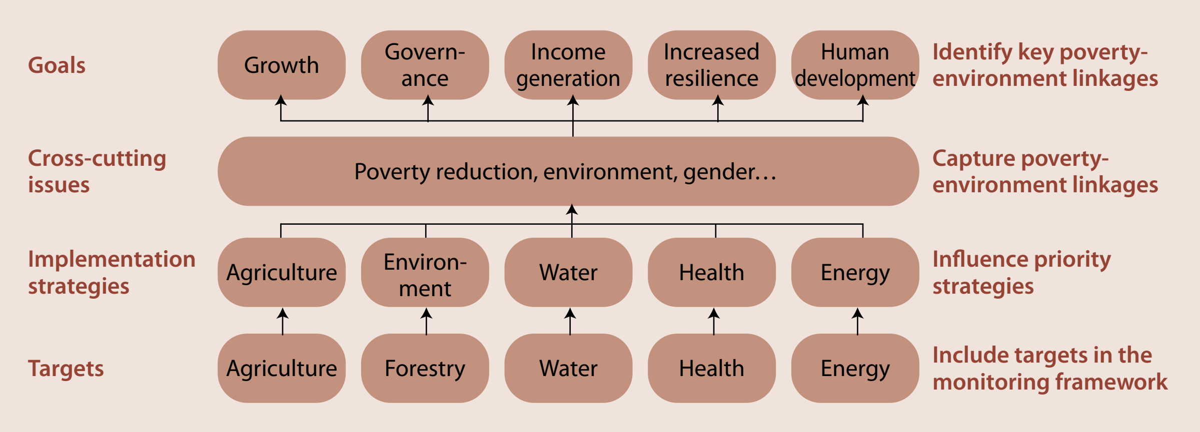
Source: OECD 2006a.

Figure 5.1 illustrates how poverty-environment issues can be included in a policy document at four levels:

1. Link poverty-environment issues to the main goals or pillars of the document and advocate having the environment as a goal or pillar of its own or as a major element of another goal or pillar (such as income generation or economic growth)
2. Capture the range of poverty-environment linkages relevant to the cross-cutting issues
3. Integrate these linkages into the sector priority implementation strategies
4. Work with sectors to identify relevant targets and ensure that poverty-environment targets are included in the monitoring framework (see section 6.1)

The environment is often regarded as a cross-cutting issue within a policy document. The strength of that approach is that environmental issues are understood to be relevant to all parts of the policy. However, the classification as cross-cutting may mean that the environment does not have an identifiable chapter or section within the doc-

Figure 5.1 Aligning the Analytical Approach with the Overall Policy Framework



ument. In this case, it may become "invisible" and may not be given priority in the budgeting process and implementation (see chapter 6).

Ideally, the structure of the policy document should be designed so that improved environmental management can be seen as both a cross-cutting issue and an identifiable goal in its own right.

Further Guidance: Steps and Examples

In working to influence a policy process, the most important tools are a strategic eye, tactical flexibility and persistent engagement. Boxes 5.8 and 5.9 present specific experiences with poverty-environment mainstreaming in Rwanda and Bangladesh, respectively. Table 5.2 gives an example of various entry points for poverty-environment mainstreaming within a policy process.

Successful mainstreaming of poverty-environment issues into the policy document paves the way for implementation of budget and policy measures at the national, sector and subnational levels. Even after poverty-environment linkages have been mainstreamed into a policy document, the work is far from over; engagement with all key actors must continue to ensure that the momentum built up through the policy process is sustained (see section 5.4 and chapter 6).

Box 5.8 Integrating Poverty-Environment Linkages into Rwanda's Economic Development and Poverty Reduction Strategy Process

Background. In January 2006, Rwanda launched the formulation of its second PRSP, the Economic Development and Poverty Reduction Strategy (EDPRS). A large number of stakeholders—including development actors, civil society and other interested groups—were invited from the onset to participate in the process. Environment was identified as a cross-cutting issue to be mainstreamed into the EDPRS, and there had been, in the recent past, much focus on the environment from the highest political level. However, capacity within the sector was quite low, and a great deal of technical support was needed for successful poverty-environment mainstreaming.

Poverty-environment champions engaging with the process. Throughout the formulation process, a team from Rwanda, with the help of the UNDP-UNEP PEI, supported all sectors involved. The work entailed participating in the development of and reviewing all sectors' logical frameworks that were the foundation for the EDPRS, contributing to the drafting process, preparing sections for selected chapters, engaging in monitoring and evaluation discussions and reviewing several drafts of the EDPRS. A key contribution was the submission of briefs to policymakers that made the case for the significance of the environment to human well-being and economic growth in the Rwandan context. The process was intensive and required continuous interaction with both sector actors and policymakers. Often, champions and PEI staff had to cover several meetings simultaneously. It proved effective to repeat the same messages in different settings, to prepare sector-specific tools, and to hold many one-on-one meetings to get messages across.

Key role of the planning and finance ministries. The ministries chaired the cross-cutting issues working group, which served as an important forum to make the case for prominently featuring poverty-environment issues in the EDPRS.

Making use of country-specific evidence. Many of the data used were collected specifically for this exercise through different assessments, including an integrated ecosystem assessment and an analysis of the economic costs of environmental degradation (see sections 5.1 and 5.2). From the economic analysis, two pieces of information had particular impact: the estimate of the cost to the government of using diesel in generating electricity ($65,000 per day), due to the degradation of the Rugezi wetland and the resulting shortfall in hydroelectric power generation (EIU 2006); and the estimation of losses to the national economy attributable to soil erosion, valued at almost 2 per cent of GDP.

Outcome. In the final EDPRS, the environment is both a goal in its own right and a cross-cutting issue. The strategy includes several environmental priorities and activities for sectors, such as removal of import duties related to renewable energy and energy efficiency, a focus on high-end ecotourism and soil conservation measures (e.g. terracing and agroforestry technologies for sustainable land use) and water harvesting and collection techniques for agriculture.

This successful mainstreaming effort has also translated into a significant budget increase for the environment sector to ensure implementation of policy measures, including in the formulation of district-level development plans.

Box 5.9 Integrating Poverty-Environment Linkages into the PRSP Preparation Process in Bangladesh

Background. Preparing the first Bangladesh PRSP was a lengthy process, starting with initial work for the interim PRSP in 2002 and ending with the final PRSP in 2005. During that period, technical support was provided for environmental mainstreaming initially by the UK Department for International Development alone and then in concert with the Canadian International Development Agency and the World Bank.

Timing of technical support. Even though technical support was not provided until November 2002, which was after the final draft of the interim PRSP had already been produced, international support played an important role in helping make the case for poverty-environment mainstreaming and in the decision-making regarding the form poverty-environment issues should take within the PRSP.

The importance of personal and institutional relationships. The initiative began under the joint championship of the permanent secretary responsible for environmental affairs in the government of Bangladesh and the resident environmental adviser from the UK Department for International Development. Their first action was to arrange a workshop, which made it clear to department heads within the government that they were expected to support and promote the poverty-environment mainstreaming effort.

Responding to changing circumstances. The departure of the two officials mentioned above ultimately led to a loss of momentum. Moreover, the perception developed in government circles that this was a donor-driven initiative. Following the publication of the interim PRSP, responsibility for PRSP preparation was moved from the External Relations Department to the General Economic Division. This transfer led to a significant hiatus in the process, with a new set of authors and a change in the document's overall approach.

The importance of stakeholder engagement. The initiative included a range of activities designed to cement engagement between the proponents of the poverty-environment approach, the drafting team and government departments. These included establishing a team of local specialists, consultations, report preparation and—finally—submission of a summary to the Ministry of Environment.

Outcome. The result of this considerable effort was disappointing. In the final PRSP documents the environment was reduced to a supporting strategy, the first draft of which presented environmental concerns simply as the "green" and "brown" issues of conservation and pollution. Further representations by the donors achieved some improvements. In retrospect, it seemed difficult to get the fundamental message across that the livelihoods of the poor of Bangladesh are completely dependent on natural resources that have been degraded through inadequate management and that are highly vulnerable to natural hazards and climate change.

This outcome underscores the importance of using the concept of "poverty-environment linkages" rather than "environment" from the very first step of a mainstreaming initiative.

Source: Paul Driver, independent consultant, 2008.

Table 5.2 Poverty-Environment Mainstreaming in the Policy Development Process

Step	Recommended actions for poverty-environment mainstreaming
1. Understand the policy process	• Develop a comprehensive understanding of the policy process (e.g. time-line, road map, steps in the process, actors and intended outputs)
2. Become part of the process	• Try to get a "seat at the table" by becoming involved early on with the government and development actors in the policy preparation process • Seize opportunities to introduce the importance of poverty-environment linkages and speak about the importance of recognizing these linkages within the policy document • Explore the possibility of a donor providing funding specifically for poverty-environment linkages within the policy process
3. Establish committees and contribute to the policy document outline	• Identify key actors in the preparation of the basic outline of the policy document (e.g. the lead government body, a core drafting committee and other advisory committees) and engage with them to influence the structure of the policy document and the drafting process • Work with mainstreaming champions from key institutions • Make necessary working arrangements with the lead institution so that poverty-environment linkages are well featured; environment can be categorized as a cross-cutting issue or a sector in its own right • Establish cooperation and coordination mechanisms with actors working on other cross-cutting issues (e.g. gender, HIV/AIDS)
4. Influence policy launch workshop	• Use this opportunity to publicize the importance of poverty-environment integration into the policy document to obtain buy-in from government and other stakeholders; effective use of the media can enhance this effort • Identify non-governmental actors and their possible involvement in the process; ensure the inclusion of various stakeholder groups (of different ages, economic levels, genders) in the workshop
5. Work with sectors and other government institutions in preparing their contributions	• Work with sectors and other government institutions to determine their priorities and contributions to the process • Engage continuously with relevant (or all) sectors to ensure that the importance of poverty-environment linkages is translated into specific targets and implementation strategies included in their written contributions
6. Shape public consultations at the district level	• Raise public awareness of poverty-environment issues • Help communities identify the poverty-environment linkages relevant to their well-being and livelihoods
7. Contribute to the drafting of the policy document	• Engage directly with the drafting team to ensure that poverty-environment linkages are understood, correctly represented and properly integrated into the policy document by reviewing and commenting on drafts
8. Participate in public consultations and review workshops on the draft policy document	• Reinforce poverty-environment linkages at public consultations and review workshops to obtain buy-in from government bodies • Make use of partnerships with non-governmental actors and media
9. Contribute to final revision of the draft policy document	• Engage with the drafting team so that revisions correctly take into account poverty-environment linkages
10. Make use of the policy publication event/workshop	• Promote future action on the basis of the poverty-environment issues highlighted in the policy document

5.4 Developing and Costing Policy Measures

Policy documents include goals, targets and—usually—implementation strategies to achieve these. The next activity is to develop and cost specific policy measures in support of these goals, targets and strategies so that they can be included in national, sector and subnational budgets and so financing sources for their implementation can be identified (see section 6.2).

In this context, **measures** should be understood both as specific interventions supporting the implementation of policy documents as well as broader sector or public reforms addressing issues such as access to and ownership of land and citizen participation in the decision-making process. A wide array of policy measures is available to governments, from regulations to market-based instruments, as illustrated in table 5.3.

Table 5.3 Environmental Policy Measures, by Category

Command-and-control regulations	Direct provision by governments	Engaging the public and private sectors	Using markets	Creating markets
• Standards • Bans • Permits and quotas • Zoning • Liability • Legal redress • Flexible regulation	• Environmental infrastructure • Eco-industrial zones or parks • National parks, protected areas and recreation facilities • Ecosystem rehabilitation	• Public participation • Decentralization • Information disclosure • Eco-labelling • Voluntary agreements • Public-private partnerships	• Removing perverse subsidies • Environmental taxes and charges • User charges • Deposit-refund systems • Targeted subsidies • Self-monitoring (such as ISO 14000 standards)	• Property rights • Tradable permits and rights • Offset programmes • Green procurement • Environmental investment funds • Seed funds and incentives • Payment for ecosystem services

Source: UNEP 2007a.
Note: ISO: International Organization for Standardization.

The absence of prioritized and costed policy measures is one of the major reasons environmental priorities do not figure prominently in government budgets and thus are not implemented. If decision-makers are to be persuaded to mandate concrete measures for addressing poverty-environment issues, they must understand what such activities will cost and how cost-effective they are.

Approach

The approach to developing and costing policy measures requires working with government and non-governmental actors at various levels and understanding the various types of cost implications.

Working with Stakeholders at Various Levels

Whether environmental management is tackled as an individual goal or a cross-cutting issue in the policy document, specific budgeting and financing for poverty-environment measures need to be identified. Developing and costing policy measures should thus be closely coordinated with budget and financial specialists from the ministries of finance and planning, from sector ministries and from subnational bodies to ensure that the measures are aligned and included at various levels of budgeting at a later stage (see section 6.2).

In addition, a number of policy areas, such as water and sanitation, urban issues and natural resource management, are the responsibility of sector and subnational bodies. Such bodies thus have a central role to play when it comes to developing and costing the policy measures.

Examples: Policy Measures

- **Sustainable land and natural resource management:** nationwide land reform; revision of access rights, control and benefit-sharing of land, forests or natural resources; establishment of a governance and legal system for land management; community-based management; reforestation
- **Sustainable agriculture:** terracing; intercropping; more efficient use of fertilizer; more efficient irrigation and rainwater harvesting; improved storage and transportation
- **Disaster management:** early warning systems; risk management programmes; participatory preparedness programmes; pro-poor insurance schemes
- **Climate change adaptation:** strengthening capacities in climate projections; alternative grazing systems; forestation using adequate species; integrated coastal zone management
- **Sustainable energy:** renewable energy generation; energy efficiency measures; sustainable transport alternatives

Non-governmental and development actors with experience in economics and costing should be included in the process. For example, working with economists from in-country universities or research organizations can be advantageous.

Business and industry also have an important role to play. First, while many natural resources (e.g. fisheries or water) are public goods for which assigning property rights may be difficult, a number of services—such as clean water, sanitation and waste management—can be provided by private actors, as they are in some industrialized countries.

Second, even when such services are best provided by government (because of market failures or for reasons of fair access to basic services), business and industry are still the target of policy measures that set up economic and regulatory incentives (e.g. bans, standards and tradable permits and rights for fishing or emissions) to address certain poverty-environment issues (see table 5.3 and section 6.2).

In light of the many stakeholders involved, the process of developing and costing policy measures clearly benefits from a participatory approach that can help in forging linkages with policy and budgeting processes, partners and target audiences.

Understanding the Various Types of Cost Implications

When developing and costing policy measures, it is important to understand the different types of costs, including transitional, political, capital and operational.

- **For reform measures** (e.g. decentralization, removal of perverse subsidies), most of the financial costs are transitional and operational costs. These may encompass training of staff, recruitment and salary of new staff and enforcement and monitoring of the reform. While such reforms have a financial cost, the cost of building political momentum for change remains the principal challenge.
- **For management measures** such as protected areas, control or regulation, the main costs are operational to cover government salaries and other recurrent costs (e.g. transport and monitoring). Budgets for training and capacity activities may also be relevant.
- **For infrastructure measures**, such as water and sanitation and waste facilities, the costs are relatively straightforward in terms of capital and operational costs. Even if the capital and operational costs of these services can be partly covered by users (through water user charges, for example), governments often have to make the main capital investment.

Focusing only on investment needs can lead to judging success solely in terms of financial aspects. Finance is crucial, and the environment has suffered from a lack of investment, but relatively low-cost investments can have high pay-offs, such as in the area of water and sanitation. For example, investments in increasing access to water supply and sanitation yield very high rates of return, with benefit-cost ratios in the range of 4 to 14; this makes them extremely attractive from a social investment standpoint (PEP 2005; Hutton and Haller 2004).

Further Guidance: Steps and Example

Measures need to be identified, developed, prioritized and selected based on cost-effectiveness, benefit-cost ratios and pro-poor implications. A five-step approach is proposed in table 5.4, and an example of the steps taken to estimate the cost of a policy measure to assess water quality is provided in box 5.10.

The United Nations Millennium Project has developed a set of presentations and costing tools to support the MDG needs assessment methodology (UNDP n.d.). Sectors currently covered include health, education, energy, gender and water and sanitation. The presentations provide an overview to MDG-based planning and cover certain thematic areas. Each costing tool comes with a user guide and is tailored to a country's specific needs.

Table 5.4 Main Steps in Developing Policy Measures in Line with a Policy Document

Step	Recommended actions for poverty-environment mainstreaming
1. Identify measures (during preparation of the policy document)	• Propose measures based on the goals, targets and implementation strategies identified in the policy document • Include generic policy measures in the policy document
2. Develop measures (following preparation of the policy document)	• Define more specific attributes of the policy measures • Identify the objectives of the measures • Define the scope, time frame and geographical coverage
3. Cost measures	• Cost each measure based on the attributes defined in the previous step; for example, the time frame of the measure enables accounting for factors such as the effects of inflation or possible currency devaluation • Establish how much is being spent on similar measures to validate the cost estimate • Set a variance of the estimated cost • Assess the absorptive capacity of the implementing agency
4. Prioritize measures	• Take into consideration pro-poor implications, benefit-cost ratios and cost-effectiveness • Consider existing and planned measures or activities of the government and development actors to identify opportunities for collaboration and avoid overlap; make use of donor coordination meetings to facilitate this step
5. Select measures	• Select the interventions that are most appropriate (e.g. policy or public reform or infrastructures) and most likely to succeed • Bear in mind cost-effectiveness, benefit-cost ratios and pro-poor implications • Mention these interventions in annexes of the PRSP, MDG strategy or similar policy document • Describe the specifics of the intervention, as far as they are developed, in sector strategies or plans and other materials such as programme documents • Develop a follow-up plan for the budgeting and implementation process

Box 5.10 Costing Process for an Intervention to Assess Water Quality

Identify possible interventions to improve water quality, e.g. protecting upstream catchment areas to reduce nutrient and pollution loads, wastewater treatment systems and monitoring of water quality according to standards.

Identify the scope, time frame and geographical coverage. Developing quantitative coverage targets for each measure will help ensure that the measure will be achieved. For example, countries may need to specify the share of urban wastewater that needs to undergo treatment to meet minimum water quality and human well-being standards.

Estimate the costs. The resource envelope needed is estimated by answering such questions as the following:

- What are the costs of protecting catchment areas?
- How much wastewater needs to undergo treatment to meet minimum water quality standards? What are the unit costs of treating wastewater?
- How often should water quality be monitored? How much does this cost?

Answering these questions enables estimation of total financial resource needs and their distribution over time. For example, if developing quality standards and building the capacity to enforce them entails large start-up costs, then more resources (for the selected intervention areas) will be needed at the beginning of the project.

Check and discuss the results. Cost estimates can be validated by checking the results of the costing exercise against those obtained in other countries with similar socio-economic and environmental situations. This also helps in interpreting the variance of the estimated cost. Finally, the absorptive capacity of the implementing agency for the measure should be discussed.

5.5 Strengthening Institutions and Capacities: Learning by Doing

This activity is aimed at strengthening institutions and capacities in a tactical manner with a view to fostering poverty-environment mainstreaming over the long term.

Approach

The approach to strengthening institutions and capacities consists of making use of the various steps in the mainstreaming process to raise the level of awareness and provide hands-on practical experience to interested stakeholders.

In doing so, it is important to target agencies with responsibility for the main policy process with implications for poverty and environment and to ensure that policy measures are taken forward once the policy process is complete.

A wide range of approaches, to be adapted to each particular context, can be used to leverage opportunities that arise throughout the process. In general, it is recommended that different approaches be combined. For example, technical support can be complemented by exchange visits (box 5.11) or preceded by a formal training (box 5.12) and followed up with on-the-job learning and guidance. Technical support can build on both interdisciplinary teams and twinning (cooperation between national organizations and their equivalents in other countries) to improve quality, national content and ownership as well as access to state-of-the-art expertise.

Box 5.11 Exchange Visits: United Republic of Tanzania to Uganda; Uganda to Rwanda

South-South cooperation in the form of study visits has yielded fresh perspectives and learning for participants.

Officials from the United Republic of Tanzania looked to the Ugandan experience to inform their own poverty reduction strategy (MKUKUTA) development process. The officials made a visit to Uganda to learn how it revised its Poverty Eradication Action Plan, particularly the role of its Environment and Natural Resources Group. The United Republic of Tanzania built on this experience when establishing its own Environment Working Group.

Later, a Uganda delegation went on a mission to Rwanda to learn from the latter's experience of mainstreaming poverty-environment issues into national development planning processes. Rwanda recently completed its Economic Development and Poverty Reduction Strategy, into which poverty-environment linkages were successfully mainstreamed. At the time of the visit, Uganda was beginning the process of reviewing its Poverty Eradication Action Plan. The following were among the key observations of the study visit:

- When the environment is treated as both an individual sector and a cross-cutting issue in the national planning strategy, there is a strong basis for integrating poverty-environment linkages throughout the strategy.
- An active role on the part of the Ministry of Finance and Economic Planning, the ministry leading the EDPRS process, was critical in integrating poverty-environment linkages into the plan across sectors.
- The process required persistent participation of environment technical officers at its various stages, including awareness-raising and capacity-building of sectors.
- High-level political support, strong institutions and a culture of law-abiding behaviour in Rwanda have been instrumental in promoting environmentally sustainable practices, as evidenced by successful enforcement of a ban on plastic bags.

Sources: UNDP, UNEP and GM 2007; Government of Uganda 2008.

It is essential to allocate sufficient human resources for the day-to-day work needed to coordinate the initiative. A team consisting of a manager, a technical adviser (international or national) and an administrative assistant who are dedicated to the effort on a full-time basis has proven to be successful for this task in the context of the PEI. It is critical that the team be an integral part of the government entity leading the effort, such as the ministry of finance or planning.

Including a technical adviser on the team yielded very positive results in Kenya, Rwanda and the United Republic of Tanzania. The technical adviser contributes to institutional and capacity strengthening in several ways, including the following:

Box 5.12 Role of Formal Training in Influencing Policy Processes: Burkina Faso and Kenya

Burkina Faso. Burkina Faso hired a team from Harvard University to train members of the Environment and Natural Resource working groups on negotiation in preparation for their participation in the Poverty Reduction Strategy preparation process.

Kenya. In Kenya, organizations including OXFAM, Action Aid and the Arid Lands Resource Management Programme sponsored members of the Pastoralists Thematic Group under the PRSP process to attend a special course on PRSP processes at the Institute of Development Studies in the United Kingdom. The training gave the group much-needed confidence and the requisite knowledge to comprehend and deal with the technical and professional challenges of PRSP formulation. Moreover, the strategic location of the Arid Lands Resource Management Programme within the Office of the President of Kenya enabled the participants to obtain access to key policymaking organs within government.

Source: UNDP, UNEP and GM 2007.

- Providing on-the-job technical advice in the area of poverty-environment issues
- Providing politically neutral inputs to the process, including in terms of targeted messages and communication
- Sharing knowledge on specific analytical tools related to poverty-environment issues

Although staff turnover can be a problem in the short term, establishing a poverty-environment mainstreaming team is a necessary step for longer-term institutional and capacity strengthening.

Table 5.5 presents a variety of approaches for ensuring institutional and capacity strengthening.

Table 5.5 Approaches to Institutional and Capacity Strengthening: Learning by Doing

Approach	Challenges	Opportunities
On-the-job learning	• High staff turnover • Staff have multiple priorities and duties • May mean undertaking a limited administrative reform while a systemwide public sector reform might be needed	• Establishing a dedicated poverty-environment mainstreaming team brings multiple advantages • Quality or environmental management systems focused on learning by doing (e.g. ISO 9000 and 14000 standards) can foster continuous improvement for poverty-environment mainstreaming • Can be applied to all types of skills and competencies
Interdisciplinary teams (e.g. environment, sociology, economics, gender, political science)	• Different disciplines usually do not "speak the same language" • Competition might exist among different disciplines • Interdisciplinary teams can take more time and resources to be set up and managed	• Involving policymakers in the design, implementation and sharing of the results of the integrated ecosystem assessment and economic analysis improves the quality and impact of such studies • Experience-sharing and learning with actors working on other cross-cutting issues, such as gender or HIV/AIDS, allows for faster progress on the learning curve • Interdisciplinary teams strengthen interpersonal skills • Interdisciplinary teams improve study quality
Working with non-governmental actors including communities	• Some actors may lack basic capacities to participate in the process • Involving different groups at the community level requires time and resources	• Involving national non-governmental actors (e.g. academia and research institutes) in the design, implementation and sharing of the results of the integrated ecosystem assessment and economic analysis improves the content and the quality of such studies • Drawing on the experiences and knowledge of indigenous peoples, marginalized communities, women and citizens facilitates the ability to better take into account the poverty dimension and improves national ownership of the effort
Twinning	• Can take more time to set up and manage • Can lead to tensions among the collaborating organizations	• Allows for South-South or North-South cooperation • Can lead to long-term partnerships • Provides access to state-of-the-art expertise from around the world • Strengthens interpersonal skills
Formal training	• Often lack follow-up and guidance after completion • Can be theoretical and not allow for application of concepts to real cases relevant to the trainees	• Highly suitable for technical subjects such as integrated ecosystem assessment or climate change
Exchange visits	• May lack follow-up and guidance after completion	• Allow for South-South cooperation • Strengthen interpersonal skills
Technical support	• May lack follow-up and guidance after the assignment is completed	• Provides access to state-of-the-art expertise from around the world • Technical experts can bring a politically neutral perspective to the effort • Reinforces on-the-job learning

Note: ISO: International Organization for Standardization.

Further Guidance: Key Opportunities

A summary of the main opportunities for institutional and capacity strengthening during the activities of a mainstreaming effort discussed thus far is presented in table 5.6.

Table 5.6 Opportunities for Institutional and Capacity Strengthening in Mainstreaming Poverty-Environment Linkages into Policy Processes

Step	Opportunities
1. Collect country-specific evidence through integrated ecosystem assessments (see section 5.1)	• Involve policymakers and national non-governmental actors (e.g. academia and research institutes) in the design, implementation and sharing of the results of the integrated ecosystem assessment • Promote a twinning approach with government and international non-governmental actors (e.g. academia, NGOs and research institutes) • Draw on the experience and knowledge of indigenous peoples, marginalized communities, women and citizens • Foster an interdisciplinary team that brings together a range of experts including those in environment, sociology, economics, gender and political science • Share the results with relevant government commissions and independent entities on e.g. planning, government performance
2. Collect country-specific evidence through economic analyses (see section 5.2)	• Involve policymakers and national non-governmental actors (e.g. academia and research institutes) in the design, implementation and sharing of the results of the economic analysis • Promote a twinning approach with government and international non-governmental actors (e.g. academia, NGOs and research institutes) • Increase knowledge on various types of economic analyses available and their impacts • Increase awareness of the environment's contribution to human well-being and pro-poor economic growth
3. Influence the policy process (see section 5.3)	• Increase awareness about poverty-environment issues, including results from integrated ecosystem assessments and economic analyses • Promote experience-sharing and learning with actors working on other cross-cutting issues, such as gender or HIV/AIDS • Promote experience-sharing and learning with development actors, sectors and other stakeholders, including civil society "watchdogs" • Strengthen capacities for advocacy and communication (e.g. drafting policy briefs, presentation skills) • Acquire experience in using a strategic environmental assessment and integrated policymaking for sustainable development
4. Develop and cost policy measures (see section 5.4)	• Increase knowledge on the types of policy measures that are available and how to select the most appropriate ones • Increase knowledge on costing methodologies and tools while ensuring equal attention to quantifying the likely benefits • Promote experience-sharing and learning with development actors, sectors and other stakeholders

Table 5.7 Summary: What Does "Mainstreaming into Policy Processes" Encompass?

Achievement	Examples
Country-specific scientific evidence, developed through integrated ecosystem assessments	• *Nature's Benefits in Kenya: An Atlas of Ecosystems and Human Well-Being* (WRI 2007)
Country-specific economic evidence, demonstrating the contribution of the environment to human well-being and pro-poor economic growth	• *Economic Analysis of Natural Resource Management in Rwanda* (UNDP-UNEP PEI Rwanda 2006a)
High awareness and understanding of poverty-environment issues at various levels	• *Poverty and Environment* newsletter (Government of United Republic of Tanzania 2005b, 2006)
Collaboration and partnerships at the country level	• Mainstreaming effort co-led by planning and environmental ministries
Environmental actors fully part of the policy process	• Environmental sector working group part of the policy process
Poverty-environment issues integrated in policy documents	• *Integrating Sustainability into PRSPs: The Case of Uganda* (DFID 2000)
Policy measures developed and costed	• Environmental fiscal reform ready to be launched
Institutions and capacities strengthened through learning by doing and tactical capacity-building	• Country exchanges (e.g. Uganda and Rwanda, Uganda and United Republic of Tanzania)
Involvement of stakeholders and development actors	• Media covering the issue • Non-governmental actors formally part of the policy process • Collaboration with national research institutes on poverty-environment mainstreaming

Chapter 6

Meeting the Implementation Challenge

Coverage

- Addresses the integration of poverty-environment issues in the national monitoring system (section 6.1)
- Explains how to participate in the budgeting process and access financing options (section 6.2)
- Proposes means to support implementation of policy measures (section 6.3)
- Discusses the establishment of mainstreaming as standard practice (section 6.4)

Key Messages

- Operationalize poverty-environment mainstreaming resulting from influencing policy-making
- Design indicators based on targets included in policy documents to integrate them in the monitoring system
- Strengthen data collection and management
- Ensure that poverty-environment policy measures are funded
- Collaborate with national, sector and subnational bodies to strengthen the implementation of the policy measures
- Embed poverty-environment mainstreaming in government and administrative processes, practices, procedures and systems in support of future national development planning

6.1 Including Poverty-Environment Issues in the National Monitoring System

A national monitoring system helps track progress made against the goals of policy documents and the implementation of strategies and policy measures; it also helps in identifying where and what kinds of corrective actions may be needed. The system can cover sectors such as agriculture or health, or cross-cutting issues such as poverty.

The overall objective of integrating poverty-environment issues in the monitoring system is to increase the chances that the poverty-environment elements of policy documents and their related strategies and measures are implemented effectively by facilitating the following:

- **Regular monitoring and reporting.** If poverty-environment issues are included in the national monitoring system, it is easier to track progress towards achieving the goals, targets and implementation strategies included in policy documents (e.g. PRSP or sector strategy). Inclusion of such issues in the monitoring system also helps maintain and improve understanding of the linkages between poverty and the environment and how they can be measured (see section 4.2). The effort can also focus on integrating poverty concerns into regular reporting on the state of the environment—information that may be mandated by national law.
- **Informing the policy process.** Monitoring poverty-environment issues allows policymakers and implementers to demonstrate the impact of policy measures put in place, share lessons learned, make adjustments in policies and guide budget and resource allocation.

  Monitoring also contributes to a better articulation of policies and measures for poverty-environment issues, and identifies emerging issues to be addressed in future policy documents and related implementation measures. For example, monitoring climate adaptation interventions and capacity to inform future policy is becoming increasingly relevant in many countries.

Approach

The approach to this activity consists of monitoring poverty-environment issues within the framework of the existing national system, developing poverty-environment indicators and working closely with the national statistics office and other institutions involved in monitoring.

- **Poverty-environment monitoring as part of the national monitoring system.** Poverty-environment issues and policy impacts should be monitored as part of the national monitoring system that should be in place to review the performance of the various national, sector and subnational implementation strategies, including those related to poverty and the MDGs. Promoting linkages between policymaking and monitoring processes is critical to improving both of these aspects of national development planning.
- **Poverty-environment indicators.** Relevant and operational indicators are the main instrument for integrating poverty-environment issues into the national monitoring system. Such indicators are usually developed through extensive research and consultations and are used to measure progress on the poverty-environment dimensions of a policy.

Examples: **Poverty-Environment Indicators**

- Percentage of households and industries using fuelwood as a source of energy
- Percentage of contribution of renewable energy sources to national energy supply
- Number of households benefiting from small-scale local-level renewable energy sources
- Percentage of local communities living around critical wetlands involved in ecotourism or recreational activities
- Number of households benefiting from legal access to biological resources that can be traded
- Percentage of poor households within 30 minutes of a functionally safe water source
- Number of people affected by environmental risks and disasters (e.g. floods, droughts and climate-related events)

- **Coordinating and strengthening the national statistics office and related institutions.** Integrating poverty-environment issues into the national monitoring system requires working with various actors. The national statistics office is usually responsible for overall data collection and analysis in response to needs identified and defined at the national, sector and subnational levels. Ministries of education, water and health may each have comprehensive monitoring and information systems and may collect routine data at the local level. Environmental bodies (e.g. the national meteorological institute) may collect relevant data on the state of the environment and emerging issues such as climate change. This distribution of responsibilities for monitoring poverty-environment issues highlights the importance of a strong coordination mechanism to avoid duplication and to reinforce and complement existing systems, such as regular surveys and census activities.

  In this regard, existing capacities in the national statistics office, planning ministries, sector ministries and other information-gathering agencies—including environmental institutions, civil society and academic institutions—should be strengthened, coordination improved and information-sharing prioritized.

Further Guidance: Steps and Example

Several steps are required to ensure that poverty-environment issues are integrated into the national monitoring system; these should be adapted to national circumstances.

- **Review literature and experience from other countries.** The literature review helps identify issues that need to be taken into account in mainstreaming poverty-environment linkages in a monitoring system. It also reveals potential indicators that may already be covered in existing routine and periodic data collection systems.
- **Organize consultations.** Consultations at various stages of the process should include both the producers and users of data to assess and create demand for data and analysis and promote linkages between policymakers and providers of information.
- **Analyse national priorities.** National priorities and poverty-environment goals, targets and implementation strategies included in policy documents must be identified so integration of poverty-environment issues in the monitoring system is fully aligned and informs future policymaking and budget allocation (see sections 5.3 and 6.2).

- **Analyse existing monitoring systems.** Poverty monitoring systems often ignore linkages with the environment, while environment monitoring systems tend not to consider the poverty impacts of environmental changes. Assessing national monitoring systems and their associated data collection and management systems provides essential information for mainstreaming. This entails analysing availability, quality and relevance of existing data sets for poverty-environment monitoring (e.g. sex disaggregation); quality and relevance of existing poverty indicators and environment indicators; roles and responsibilities; and potential providers of data for poverty-environment monitoring.
- **Identify and assess possible poverty-environment indicators.** Identifying possible indicators should be done in a participatory manner and build on previous steps (see chapter 5). As mentioned earlier, the indicators should be fully aligned with documents, such as the PRSP, that constitute the framework for policy implementation. Indicators should be measured at national, sector and subnational levels to ensure that various impacts are captured.
- **Select a core set of indicators.** A wide range of poverty-environment indicators is possible at this stage. These should be narrowed down to a small number of strategic indicators that can realistically be monitored and will inform future policy processes effectively. The criteria in box 6.1 can help in selecting the indicators.

Box 6.1 Selection Criteria for Poverty-Environment Indicators

- **Measurable, objective and reliable.** Indicators should be able to be expressed in quantitative terms. Their calculation should be repeatable with similar results. The data should be of good quality and available. Refinement of existing data collection systems should be considered.
- **Comparable and sensitive to changes.** Indicators should facilitate assessment between different circumstances and timescales and detect variations, hence the importance of regular data collection.
- **Policy-relevant.** Indicators should be useful for policymaking. They should be aligned with national priorities, policy documents and other policymaker needs.
- **Multipurpose.** Indicators should be relevant to various actors or development issues including sector issues, the MDGs and multilateral environmental agreements.
- **Gender-sensitive.** Indicators should be gender-sensitive and their data able to be disaggregated by sex so that further analysis from a gender perspective can be undertaken.
- **User-friendly.** Indicators should be easy to understand, interpret and communicate. Their number should be limited, and they should be structured along a logical framework.
- **Cost-effective.** Indicators should be measured in an affordable way. Considerations on future data management and analysis should be taken into account when selecting them. Proxy indicators (e.g. presence of certain fish species to measure water quality) can be useful.
- **Context, time and spatial dependent.** Indicators are valid for the reality in which they are designed. Often this involves a geographic limitation of the scope of the indicator (e.g. local, national or international).
- **Aggregable.** It should be possible to aggregate the measurements of the indicator from two or more geographical areas to provide regional or national values.

Sources: Adapted from UNDP-UNEP PEI 2008b; UNEP 2008b; Government of United Republic of Tanzania 2005a.

- **Integrate poverty-environment indicators in the monitoring system.** There are various ways to integrate the indicators at national, sector and subnational levels—for example, during periodic reviews of the national poverty or MDG monitoring system, and in ongoing census or routine data monitoring systems. The process involves strengthening existing systems to capture, analyse and disseminate information on poverty-environment issues. It also means developing baseline data for these new indicators (box 6.2).

Box 6.2 Integrating and Monitoring Poverty-Environment Indicators within the Framework of Rwanda's EDPRS

Background. Rwanda's environmental institutions coordinated the development of poverty-environment indicators and a strategy for monitoring them within the framework of the country's Economic Development and Poverty Reduction Strategy.

Approach. The process included the following steps:

- Reviewing the literature on existing country survey results
- Participating in EDPRS sector working group meetings and workshops
- Interviewing technical staff in different sectors and ministries
- Identifying the poverty-environment linkages
- Setting the selection criteria—e.g. measurability, feasibility of setting baselines
- Developing a list of indicators assessed for their policy relevance against priority issues
- Categorizing the indicators and identifying data sources and availability
- Selecting indicators for inclusion in the EDPRS monitoring system

Outcome and way forward. The effort instilled an appreciation among decision-makers that poverty-environment indicators are needed. The process does not stop there, however. Indicators are a tool to be continuously improved with practical lessons. They are meant to help deliver messages to influence policymaking in relevant sectors. Strong advocacy is therefore as important as the quality of the indicators, and this is the challenge ahead.

- **Strengthen institutions and capacities.** Institutions and individuals must know how to develop and use poverty-environment indicators, and how to collect, analyse and manage data (revision of surveys, data storage and management and geographical information system). Working with the United Nations Statistics Division, research institutes and universities can be a good start in this direction. Part of this effort involves documenting the process of integrating poverty-environment linkages into the monitoring system.

- **Regularly disseminate results of the analysis.** Integration of poverty-environment linkages in the national monitoring system is an iterative process. The effort aims at informing policymakers and implementers about linkages, trends and impacts of policy measures in order to make the necessary adjustments in policies and budgets. Interaction with a wide range of actors should be sustained to maintain awareness and gain feedback.

- **Regularly review the monitoring system.** Gathering feedback from the users and producers of data will facilitate periodic review of needs, indicators, data sources and data gaps in order to gradually improve the poverty-environment dimension of the monitoring system based on evolving needs, circumstances and means (e.g. technology and financial resources).

6.2 Budgeting and Financing for Poverty-Environment Policy Measures

Many poverty-environment measures are underfunded and rely on external donors. Budgeting and financing for poverty-environment mainstreaming aims at securing the funding necessary to implement strategies and reach goals set forth in policy documents, with a focus on mobilizing domestic financial resources.

Poverty-environment measures require investments by both the public and private sectors. While there are examples of market creation through which business and industry can finance interventions, many environmental issues are still underaddressed by the private sector because of market failures. Public financing thus remains central to poverty-environment mainstreaming.

The main mechanisms for public spending are national, sector and subnational budgets. Financing sources include tax and non-tax revenues, such as user charges and fees from permits or licences on natural resources and parking fees.

Approach

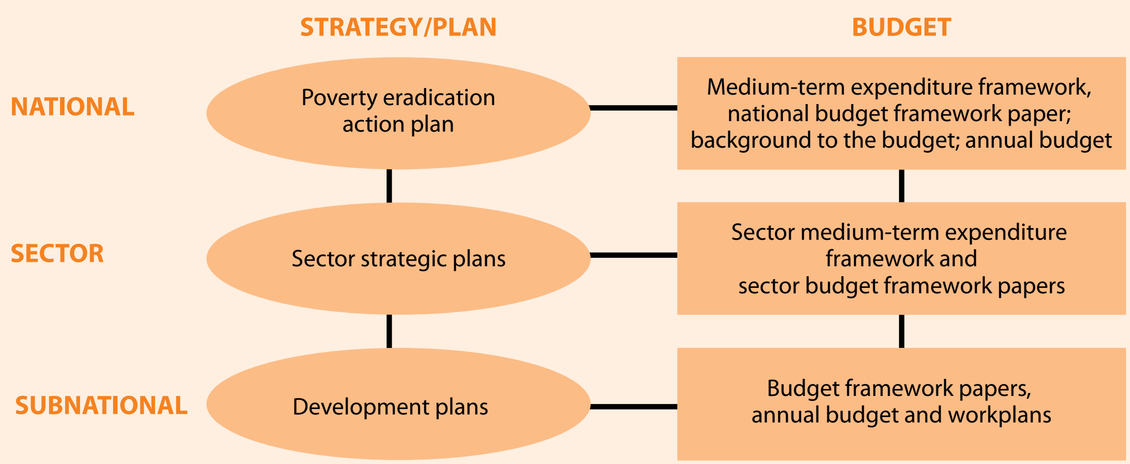
The approach to this activity consists of engaging in the budgeting process at various levels and of improving the contribution of the environment to public finances.

Engaging in the Budgeting Process

Engaging in the budgeting process requires an understanding of the process; coordinating with related policy processes; and working with civil society, donors and sector and subnational bodies.

- **Understanding and becoming part of the process.** As when working to influence policymaking (see section 5.3), engaging in the budgeting process requires understanding and becoming part of the process at various stages and levels while making use of relevant tools. The budgeting process takes place at national, sector and subnational levels (figure 6.1). In some countries, including Uganda, the process begins at the district or village level, which is useful in capturing pressing priorities. In other countries, such as Eritrea, the budget is decided upon at the cabinet level and funds

Figure 6.1 Planning and Budgeting Instruments in Uganda



Source: Wilhelm and Krause 2007.

distributed accordingly; ministries also have their own budgets, which contribute towards the overall budget. A country's budgeting process may include a three- or five-year medium-term expenditure framework; participation by environmental actors in such a framework can yield significant rewards (box 6.3).

This engagement should follow the budgetary calendar and practices, and meet the standards of the ministry of finance or planning. It should be conducted through working mechanisms of the budgeting process, such as advisory groups to the various budget committees. Lessons from gender budgeting processes can be applied to poverty-environment budgeting efforts.

Box 6.3 Incentives for Environmental Institutions to Participate in the Medium-Term Expenditure Framework Process

- Greater budget predictability, allowing institutions to plan with more certainty for multi-year programmes
- Improved strategic planning and management through better priority-setting and preparing multi-year, costed programmes to achieve priorities
- A better system of target-setting and performance indicators to put in place credible monitoring procedures
- Improved and more accurate financial planning: the medium-term perspective in budgeting is particularly beneficial to environmental actions, which are often long term in nature
- Greater demand for good economic and financial tools to prepare well-costed programmes as environmental agencies need to demonstrate a convincing use of available resources

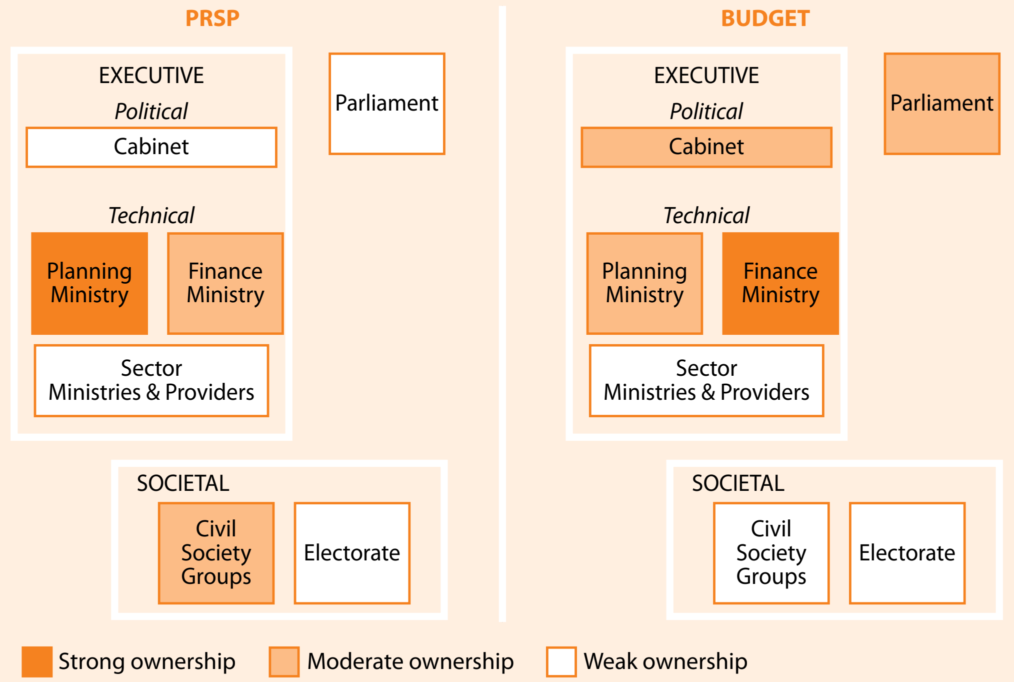
Source: Petkova and Bird 2008.

- **Coordinating with related policy processes.** Coordination with policy processes is critical and complex, and entails myriad institutions and actors engaged in a variety of initiatives in the planning and budgeting process. Figure 6.2 conceptualizes typical patterns of ownership in the PRSP and budget processes.

  Although the situation varies from country to country, the planning ministry generally has strong ownership of the PRSP process, with the finance ministry and civil society having relatively less ownership. Conversely, the finance ministry has strong ownership of the budget process, with the planning ministry playing a lesser role. Parliament also has moderate ownership of the budget process, while civil society has a relatively weaker influence. Where the planning and finance ministries are separate institutional entities, there is no automatic incentive for strong coordination between the two. Also, since parliament and the cabinet tend to own the PRSP process less, they are less likely to focus on PRSP priorities when reviewing the budget (Wilhelm and Krause 2007).

  As with poverty-environment mainstreaming at the policy level (see section 5.3), it is imperative to engage with the main players who drive the budget and to use their language. Economic analyses targeting specific sectors or issues (see section 5.2) can help develop arguments and strengthen the case with the sector and subnational bodies and the ministry of finance. The costing of policy measures developed earlier in the process (see section 5.4) provides useful elements in this budgeting context. Also,

Figure 6.2 Asymmetries of Ownership in the PRSP and Budget Processes



Source: Wilhelm and Krause 2007.

ensuring high-level political ownership is central to successful poverty-environment mainstreaming in the budgeting process.

Note that if the environment is regarded as a cross-cutting issue in the PRSP or other policy document, there may not be specific funding for poverty-environment issues; instead, funding for poverty-environment measures may be spread throughout the sectors and subnational bodies. In such circumstances, it is even more critical to work closely with the various actors—for example, through sector working groups or with subnational bodies—to make sure that funding for poverty-environment interventions is not left out of the national budget.

Example: Budgeting for the Environment in Uganda

After the Ugandan National Environment Management Authority had worked to integrate the environment into its PRSP, it seized on an opportunity to include the environment into the national budget. A key deadline for finalizing the budget was imminent. The authority's executive director made a phone call to the budget director at the Ministry of Finance explaining the importance of the environment to development and the costs of inaction. The budget director was convinced and immediately accepted the idea of adding guidelines for the environment into the budget call circular. Since then, the budget director has been challenging environmental actors to present more concrete, detailed and costed proposals on which environmental interventions should be prioritized by sectors and local governments. His leadership has been extremely positive and presages a bright future for mainstreaming efforts in Uganda.

Source: UNDP-UNEP PEI 2008a.

- **Mobilizing civil society and the public.** Civil society typically has a relatively important role in the PRSP process (e.g. through participatory appraisals) but limited influence over the budget, albeit with the potential for further involvement. While there is growing evidence of gender budgeting frequently being driven by civil society, a similar approach towards poverty-environment budgeting has yet to take off. Public demand and political support for pro-poor environmental investments could translate into a clear demand for addressing poverty-environment issues—for example, when it comes to such environmental risks and disasters as floods.

> **Example: Investment in Climate Adaptation in Viet Nam**
>
> The significant increase in natural disasters in Viet Nam in 2007 led the government to decide to immediately develop a targeted investment programme focusing on climate adaptation.

- **Coordinating and working with donors.** Many poverty-environment issues will continue to be donor financed over the medium term. Consequently, donor support must be increased either specifically or through general budget support modalities for both the environment ministry and sector ministries so they can integrate poverty-environment issues in their work.

  Budget and sector support is increasingly used to disburse donor funds but is sometimes criticized for allowing environmental issues to be ignored. The solution lies in moving towards innovative approaches of joint donor poverty-environment funding leveraging donor groups. Improving harmonization among the many external sources of global funds (e.g. the GEF) with the national budget and other donor sources can also be beneficial.

  Because budget support will be provided in line with the priorities in the PRSP or equivalent policy document, poverty-environment issues must be mainstreamed into the policy documents (see section 5.3). Further, as in the United Republic of Tanzania, champions must work with government and donors to include poverty-environment indicators (see section 6.1) in relevant government-donor performance budget assessment frameworks to ensure that appropriate attention to poverty-environment issues is built into these funding performance assessment mechanisms.

> **Example: Environment Included in Performance Assessment Framework in the United Republic of Tanzania**
>
> In the United Republic of Tanzania, where donors provide direct budget support of approximately $600 million per year, it was imperative to ensure this aid had an environmental sustainability component. The national government, with the support of some donors, developed environmental indicators for the performance assessment framework—the tool that measures performance from direct budget support. The inclusion of these indicators has helped elevate the environment to a higher level and has focused government attention on its own environmental performance.
>
> **Source:** Assey et al. 2007.

- **Advocacy of appropriate financing to sector and subnational levels.** Sectors and subnational bodies play a key role in environmental service provision and management. Attempts to promote poverty-environment measures have had mixed success partly because many subnational bodies lack capacity and financial resources and may not be focused on poverty reduction. In particular, local authorities' lack of adequate funding can drive them to maximize short-term harvests of natural resources as a means of collecting operating revenues. The Namibian experience with protected areas shows that the success of protected areas depends on strengthening funding (box 6.4).

Box 6.4 Financing Namibia's Protected Areas

Background. Studies have highlighted tourism—particularly centred around the nation's wildlife—as one of Namibia's most important industries. Indeed, purchases of services by foreign tourists were estimated to be about 3,100 Namibia dollars (N$) in 2003, accounting for some 24 per cent of the country's total exports of goods and services. Although Namibia's protected area system has significant economic value because of the direct and indirect income it generates through tourism and wildlife industries, its management was heavily dependent on a limited budgetary appropriation that was far from sufficient. Shortages of funds meant that the protected area system struggled to meet its conservation objectives and that there was little investment in it.

Approach. To facilitate more adequate income flows for enhanced protected area management, the Ministry of Environment and Tourism, with support from the GEF and UNDP, estimated the economic values associated with the protected area system with a view to using this information as a basis for planning investments in the system over the next decades.

Outcome. The study found that parks contribute N$ 1 billion to N$ 2 billion to the national economy. Demonstrating the economic contribution of parks led to an increase in core funding from N$ 50 million to N$ 110 million. This increase is in turn expected to generate a positive rate of return of 23 per cent.

The study highlighted the need to understand true costs, economic contribution and potential revenue streams for parks. It also demonstrated that the survival and success of the protected area system increasingly depends on strengthening funding. This includes funding by international grants and government, and by capturing more of the existing and potential direct use value. The study concluded that it was critical to develop incentives—that is, to retain revenues earned within the park agency.

Source: Turpie et al. 2004.

Understanding the Contribution of the Environment to Public Finances

As the Namibian case illustrates (box 6.4), valuing the economic contribution of natural resources and their replacement costs when depleted can inform policymaking, budgeting and financing for poverty-environment issues (see section 5.2). It can also help limit the depletion of resources and increase revenue collection. Successful valuation requires strengthening the capacities of environment, planning, finance, and sector and subnational bodies to track and forecast this contribution and how it can be improved—for example, through public expenditure review and environmental accounting (box 6.5).

Box 6.5 Evidence Leads to Larger Budgets for Environmental Institutions

Cambodia. The Fisheries Department was able to show that it contributed 10 per cent of GDP. This analysis was instrumental in persuading the Ministry of Finance to accord fisheries more government funds and higher priority in dialogues with donors (ADB 2000).

Pakistan. Evidence was presented to the cabinet showing the benefits of improved sanitation and clean water in comparison to lower provision costs. The cabinet immediately approved increased investment in water supply and sanitation.

United Republic of Tanzania. The Ministry of Finance increased the budget allocation to the environment from just over 1 billion Tanzanian shillings in 2005–06 to almost 5.7 billion Tanzanian shillings in 2006–07 on the strength of evidence from a public expenditure review that showed an annual loss of $1 million in the sector. It found additional investment in the sector worthwhile, based on evidence of its high contribution to household incomes and livelihoods (UNDP, UNEP and GM 2007; Assey et al. 2007).

Increasing Revenues from the Environment

The environment sector can better contribute to public finances by raising revenues through sustainable market mechanisms and environmental management.

Environmental institutions should work to increase the amount of revenues they raise to support the environment and other development priority sectors such as health and education while ensuring sustainable management of natural resources. In some cases, environmental institutions are able to collect their own taxes and charges, which can be reinvested in improved management. In many protected areas, a share of the entrance fees goes to park management. In several African countries with rich offshore fisheries, a share of the licence fees paid by foreign fleets is earmarked for regulating the fishery. Such user charges constitute a type of **environmental fiscal reform**.

Environmental fiscal reforms entail a wide range of taxation and pricing instruments that can help countries raise revenues while creating incentives that generate environmental benefits and support poverty reduction efforts—for example, by financing infrastructure that improves access of the poor to water, sanitation and energy services. Environmental fiscal reforms can thus also be considered as policy measures (see sections 5.4 and 6.3), as they influence the way the environment is managed.

The government can create **market mechanisms** that can contribute to raising revenues, translate into investments that would otherwise have necessitated public spending (e.g. renewable energy facilities) or create incentives for sustainable environmental management. Payment for ecosystem services and carbon trading are two examples of such mechanisms.

Payment for ecosystem services, also known as payment for environmental services, refers to a variety of arrangements through which the beneficiaries of ecosystem services compensate the providers of those services. Payment schemes may be a market arrangement between willing buyers and sellers, perhaps intermediated by a large private or public entity, or payments may be government driven (WWF 2008).

Examples: Payment for Ecosystem Services

- **Africa.** Tourist companies pay communities for their protection of local wildlife.
- **United States of America.** A portion of household water bills in New York is used by the water company to compensate farmers in the vicinity for watershed protection services.
- **Costa Rica.** The government uses a fraction of the tax on energy to compensate farmers for forest conservation services.

The Clean Development Mechanism (CDM) under the Kyoto Protocol to the United Nations Framework Convention on Climate Change allows industrialized countries with emission reduction commitments to invest in projects that curb emissions in developing countries as an alternative to more expensive emission reductions in their own countries. In practice, this means that industrialized countries finance investments in the fields of renewable energy (e.g. wind, hydropower, biomass energy), improved industrial processes and energy efficiency, improved waste management (landfill gas) or agriculture in developing countries.

The CDM is entirely commercial in nature, involving contracts between polluting entities and those that can generate emission offsets at a lower cost. The result is that CDM participants inevitably seek the most cost-effective way of generating carbon credits, which usually entails a focus on large-scale industrial processes or other carbon-intensive practices. Poor people therefore have few means of directly benefiting from the CDM. In addition, the CDM's rules, procedures and methodologies are complex, limiting participation (thus far) to a handful of relatively advanced countries. In 2006, over 90 per cent of the CDM projects benefited only five middle-income countries and emerging economies (UNDP 2006).

While the CDM is the officially sanctioned carbon trading mechanism between industrialized and developing countries, there are other means by which credit for carbon sequestration can accrue to developing countries. Considering the growing number of global opportunities to obtain funding for climate change, institutions and capacities to understand and interact with the global institutions involved need to be strengthened.

The way revenues are shared among different levels of government raises issues. Earmarking revenues from pollution or natural resource extraction taxes to the sectors or subnational bodies that are collecting them can stimulate collection efforts, public support for taxes and the predictability of financing for these institutions. On the other hand, earmarking raises questions of equity, efficiency of resource allocation across sectors and regions, and marginalization of environmental issues in the mainstream budget process (OECD 2007).

Even if the revenue raised by environmental institutions goes to the treasury, it can help argue for a higher level of budget allocation for the environment sector (box 6.6) or convince decision-makers to invest in long-term poverty-environment policy measures.

Box 6.6 Increased Revenues Lead to Larger Budgets for Environmental Institutions

Bangladesh. With increased collection of licences and fines on industrial enterprises for pollution control, the Department of Environment increased its revenue more than threefold over 2007. On the basis of this success, it has convinced the treasury to allocate funds for an additional 1,000 staff members.

Sri Lanka. By managing its plantations more profitably, the Forestry Department was able to reduce its demand for public revenues considerably. Its demonstrated ability to generate revenues has gained it a higher budget allocation from the treasury.

Addressing Tax Evasion and Corruption

Efforts to reduce tax evasion and corruption can considerably increase financing for poverty-environment measures, as illustrated by the examples below. This requires tougher enforcement for companies that extract natural resources and within the government.

Beneficiary involvement—by which measures are partly financed by contributions from the population—can also reduce corruption and keep costs down. Collective management of forestry is widespread in many parts of the world, with local user groups receiving a share of the benefits of timber and non-timber products. Similarly, collective fishery management is increasing, with major successes in Cambodia and attempts in Bangladesh.

Examples: Financial Losses from Tax Evasion and Corruption

Global. Worldwide, estimates suggest that illegal logging activities may account for over a tenth of the total global timber trade, representing products worth at least $15 billion per year (Brack 2006). Similarly, the value of illegal, unreported and unregulated fishing in developing countries is estimated at $4.2 billion to 9.5 billion (MRAG 2005).

Cambodia. Bribes to government officials in the Forestry and Land Departments in 1997 were estimated at $200 million per year; official revenue from legal forest operations was only $15 million (UNDP et al. 2003).

Indonesia. Research suggests illegal logging in East Kalimantan results in $100 million in lost tax revenues each year (CIFOR 2006).

Papua New Guinea. The rich tuna fishery industry of the Pacific is prone to much tax evasion. In Papua New Guinea, the cost from illegal, unreported and unregulated fishing is over $30 million per year (MRAG 2005).

Further Guidance: Key Entry Points

Table 6.1 provides guidance for engaging with the budgeting process.

Table 6.1 Poverty-Environment Mainstreaming in the Budget Process

Entry point	Recommended actions for poverty-environment mainstreaming
Budget execution report of previous financial year(s)	• Assess and review the existing budget allocations and level of spending for poverty-environment measures in the lead ministry, sectors and subnational bodies • Use the results of an independent public environmental expenditure review or other economic analyses to inform the overall public expenditure review • Verify whether the planned budget for poverty-environment measures was actually received and the planned measures implemented • Compare expenditures with initial financial requirements to identify the funding gap • Work closely with sectors and subnational actors; organize working groups or consultative meetings to discuss and prepare sector and subnational budget reports that consider poverty-environment measures and issues
Budget call circular and budget guidelines	• Integrate guidelines for poverty-environment budgeting in the budget call circular sent out by the ministry of finance; if necessary, integrate new budget codes for environment-related expenditures in these documents
Preparation of sector and subnational budgets	• Provide assistance in budgeting for poverty-environment issues, including assessing revenues from natural resources at each level • Ensure that subnational bodies benefit from adequate funding to avoid over-harvesting of natural resources at the local level
Revision of budgets submitted	• Sectors and subnational bodies submit their budgets to the ministry of finance, which then discusses the budget with other ministries; ensure a good understanding of poverty-environment linkages at all levels so national, sector and subnational bodies can include funds that address these priorities in their budgets
Selection of priority sectors or programmes and budget allocation	• Encourage inclusion of poverty-environment measures in budgets of priority sectors and programmes; priority areas are given prominence in terms of resource allocation and may also be given special protection against within-year cuts in budget disbursements (Wilhelm and Krause 2007); activities in priority areas are tracked more closely during implementation • Ensure an increased budget allocation for the environment sector itself; without a stronger environmental sector contribution and technical assistance, poverty-environment mainstreaming will not be sustainable
Discussion and approval in parliament	• Promote transparency and budget information disclosure to parliament and the public; encourage verification of budget execution, results and new budget allocations
Budget execution and expenditure management	• Once funds have been allocated, apply good practices in terms of expenditure management • Verify that public expenditures achieve the intended results and contribute to a coherent strategy for achieving poverty-environment objectives
Budget monitoring and reporting system	• Ensure that the system for monitoring budget execution includes indicators to monitor progress on poverty-environment mainstreaming • Keep indicators simple but tailored to user needs so they can facilitate future reporting, decision-making or corrective measures in the policymaking and budgeting processes

6.3 Supporting Policy Measures at the National, Sector and Subnational Levels

For the mainstreaming efforts made during the policy and budgeting processes to produce results, it is necessary to provide support for implementation of the policy measures previously identified and costed (see section 5.4).

The main objective of supporting the policy measures is to ensure that they are implemented effectively and that the budget allocated for poverty-environment issues is executed. A related objective is that policy measures are integrated and enacted through related national, sector and subnational programmes and activities. A final objective is ensuring that lessons are learned through monitoring and evaluation.

Approach

The approach to this activity consists of providing technical support and engaging with government and development actors at national, sector and subnational levels during the various stages of implementation, as described below:

- **Planning of policy measures,** including defining an implementation plan, assigning roles, building partnerships and assessing the policy measures (box 6.7)

Box 6.7 Strategic Environmental Assessment of Mexican Tourism

Background. Tourism accounts for approximately 9 per cent of Mexico's GDP. It is the country's third largest source of foreign currency ($10,800 million a year), drawing more than 52 million domestic and 20 million international visitors in 2004. However, if de-linked from sustainable planning and investment, tourism growth can threaten the very resources on which it is based. In a 2002 tourist survey, environmental quality—one of the key determinants for selection of tourist destinations—received the lowest rating. Mexico's 2001–2006 National Development Plan emphasized the need for economic development with human and environmental quality.

Approach. A strategic environmental assessment process of the tourism sector was initiated to formulate and implement a sustainable policy for the country. To ensure broad participation and commitment across sectors, an Intersectoral Technical Working Group was established, drawing on representatives from the tourism, environment, forests, water and urban development sectors and the interior and finance ministries. It set sector priorities, an action plan for implementation and medium-term monitoring indicators. The group has since been formalized as the Intersectoral Commission for Tourism.

Key benefits. Several benefits were realized from the assessment:

- It provided environmentally based evidence to support informed decisions. It identified environmental opportunities and constraints associated with different growth scenarios, as well as priorities consistent with optimizing the benefits from tourism without overexploiting the environment.
- The approach translated into participation from all sectors and relevant stakeholders. The working group enabled parties with different mandates over natural resources and other issues to make durable commitments and reach agreements with a long-term perspective.
- The findings of the analytical work are informing a policy for sustainable development of tourism.

Source: World Bank 2005, cited in OECD 2006b.

- **Implementation of policy measures,** including engaging stakeholders, raising awareness and strengthening institutions and capacities (e.g. for programme, financial and environmental management)
- **Monitoring and evaluation of policy measures,** including financial follow-up and lesson learning (box 6.8)
- **Scaling up of policy measures,** including duplicating and broadening successful measures

Box 6.8 Evaluating Policy Measures: Economic Instruments Targeted at Energy, Water and Agriculture for the Benefit of the Poor in Uganda

Background. Uganda has begun evaluation of its Poverty Eradication Action Plan and formulation of the next one, to be called the Five-Year National Development Plan. As part of the plan's formulation, sector working groups have been requested to generate evidence that will influence the choice of priority actions. The Environment and Natural Resources Sector Working Group has commissioned a study on the use of economic instruments for environmental management.

Case 1: Promotion of alternative sources for lighting and cooking. In 2006–07, the Ministry of Finance exempted the value added tax on liquid petroleum gas to increase its affordability as an alternative source for lighting and cooking. While the policy aims to help the poor, only 2.3 per cent of the rural population use electricity, liquid petroleum gas or paraffin for cooking, so the subsidy's chances of helping the poor are low. In addition, the Uganda Revenue Authority has forfeited 3.4 billion Ugandan shillings ($2.1million) in revenue in one year. Following the evaluation, it was recommended to reintroduce the duty and to use the revenue to fund activities such as tree planting that can benefit the environment and the poor.

Case 2: Implementing the polluter-pays principle to curb water pollution. In 1998, the government introduced a water waste discharge fee ranging from 0 to 13 million Ugandan shillings ($0 to $7,000) in proportion to the biological oxygen demand load. The fees are meant to encourage investment in less polluting technologies. However, the legislation only states that companies may register for discharge permits. As a consequence, despite economic growth, only 27 companies have registered out of around 200 businesses that were initially identified. The current legislation thus needs to be amended to require that all major water polluters register for discharge permits.

Case 3: Revision of unsuccessful incentives to promote pro-poor productivity in agriculture. In 2005–06, the Ministry of Finance exempted interest earned by financial institutions on loans granted to persons engaged in agriculture to encourage them to lend to the sector. To further encourage banks, the minister proposed in 2006–07 that expenditures, losses and bad debts incurred in lending to the sector be tax deductible. From an environmental perspective, there is no evidence as to the impact of this lending. Moreover, only 1.8 per cent of rural households borrow from formal sources and 4.5 per cent from semi-formal sources. Given that small-scale subsistence farmers account for 70 per cent of the poor, it is unlikely that this policy has had a significant impact on poverty. It is thus recommended to collect data on the specific use of the agricultural loans to enable monitoring of impact. A case can be made for transferring some of the tax break to microfinance institutions, which are more likely to lend to the rural poor. Tax breaks that banks claim for their expenditures and losses in the agriculture sector need to be monitored.

Source: UNDP-UNEP PEI Uganda 2008.

Further Guidance: Steps and Example

Table 6.2 presents steps in the policy measure implementation process and actions to be taken for poverty-environment mainstreaming in this process. These steps should be adapted to the particular context; depending on the circumstances, steps may be done concurrently or in a different order.

Table 6.2 Main Steps in Implementing Policy Measures

Step	Recommended actions for poverty-environment mainstreaming
1. Develop an implementation plan	• Develop the measure in line with the national, sector and poverty-environment priorities identified in the policy document at stake (see section 5.4) • Assess the environmental and poverty components of the policy measure, e.g. through a strategic environmental assessment or other type of analysis • Include information on the measure, objectives, timing, scope, tasks, stakeholders, partners and monitoring and evaluation
2. Assign clear roles	• Understand the institutional set-up and the decision-making process • Include specific tasks such as producing reports or studies and ensuring deliverables
3. Build partnerships	• Work with partners who can provide guidance, advice and technical assistance during implementation • Coordinate with initiatives or projects that have similar objectives
4. Engage stakeholders, raise awareness and strengthen institutions and capacities	• Engage with stakeholders to foster quality, consensus and ownership • Raise awareness through media campaigns to broaden the circle of those affected by the policy measure • Use national institutional, human and technical resources for long-term sustainability • Provide technical support for programme and financial management
5. Monitor	• Monitor and collect feedback on how the implementation is progressing, including following up on expenditures • Carry out a midterm review or evaluation with the help of staff, practitioners and actors involved in implementation; use the findings and recommendations to influence the remainder of the implementation • Use benchmarking as a means of encouraging subnational bodies to adhere to sector policies and guidelines, and improve service delivery
6. Evaluate and collect lessons	• Evaluate the benefits of the measure for poverty reduction and the environment and feed lessons back to the relevant processes, including policymaking and budgeting • Use external evaluators to raise issues potentially overlooked by insiders • Share lessons learned with those who worked on developing and implementing the measure; use lessons learned to influence how future interventions are carried out • Use audits to increase accountability
7. Replicate the intervention	• Scale up or replicate measures successful in one area or sector by collaborating with other sector and subnational bodies

Sources: Kojoo 2006; ODI 2004; OECD, EUWI and WSP 2007.

Box 6.9 presents an initiative to support the development of district environment action plans in Kenya, which highlights the importance of partnership-building, stakeholder engagement, institutional and capacity strengthening, lesson learning and making use of opportunities for replicating the effort.

Box 6.9 Kenya: Integrating the Environment into Development Planning at the District Level

Kenya's poverty-environment mainstreaming effort included support to develop district environment action plans in three of its nine Millennium districts (an expansion of the Millennium Villages project, which looks to demonstrate that rural Africa can achieve the MDGs through community-led development): Bondo District (Nyanza Province), Murang'a North District (Central Province) and Meru South District (Eastern Province).

Approach. The action plans were developed in line with the 2009–2013 district development plans. Their development incorporated the following:

- Community-based planning, in collaboration with the World Wide Fund for Nature (WWF)
- Training of district environment council members, retreats and field visits
- Drafting of district environment action plans based on these outputs
- Joint missions from the Ministry of Planning and National Development, the National Environment Management Authority and the UNDP-UNEP PEI
- Stakeholder workshop to review the draft and prepare an implementation matrix
- Finalization of plans based on workshop outputs and comments from the National Environment Management Authority
- Budget preparation
- Endorsement of the plans by the District Executive Committee

Although some plans were more complete than others, the project produced a valuable learning experience and is being scaled up to other districts.

Lessons learned. Among the lessons learned were the following:

- A bottom-up approach is challenging in that community-based priorities were not incorporated in the district-level planning process.
- Support to community and facilitation of district planning is best done through local actors.

Additionally, linkages between the environment and planning were strengthened as a result of joint support from the respective institutions.

Source: Wasao 2007.

6.4 Strengthening Institutions and Capacities: Establishing Poverty-Environment Mainstreaming as Standard Practice

The aim of this activity is to make sure that poverty-environment mainstreaming will be sustained in the long term, once the initial mainstreaming effort is complete. The goal is to ensure an enduring integration of poverty-environment issues in policymaking, budgeting, implementation and monitoring. More specifically, the objective is to embed poverty-environment issues in government and institutional systems, and to foster an understanding among the people who work within these systems so they can improve public performance and achieve poverty-environment objectives.

Approach

The approach to this activity is based on a solid understanding of what has made previous initiatives succeed or fail and of government and administrative processes, practices, procedures and systems in order to develop a long-term approach to establishing poverty-environment mainstreaming as standard practice.

Taking Stock of Previous Efforts

The activity begins by taking stock of all efforts towards institutional and capacity strengthening made since the inception of the poverty-environment mainstreaming initiative. This includes the institutional and capacity needs assessment carried out during the initial effort (see section 4.4) and the experience and lessons gathered through tasks carried out previously (see section 5.5).

Analysing Government and Institutional Processes and Developing a Strategy

Drawing from the information gained throughout the process, the starting point of the strategy is to conduct a robust analysis of routine government and institutional processes, practices, procedures and systems with a view to entrenching previous efforts in poverty-environment mainstreaming and making the programme sustainable. Key elements to consider in the strategy include the following:

- **Recurrent entry points.** Recurrent entry points or regular processes include the revision of policy documents such as a PRSP, a national development strategy and sector and subnational strategies or plans. Mainstreaming poverty-environment linkages in the reviews of the national budget allocation process (e.g. medium-term expenditure framework) is also critical to long-term results.
- **Institutional cooperation mechanisms.** Mechanisms for long-term engagement among the environment, finance, planning, and sector and subnational bodies should be put in place. These mechanisms can take the form of thematic working groups or stakeholder meetings, or make use of existing governmental committees or donor coordination mechanisms, among others. New structures can thus be created or existing mechanisms leveraged. The modalities of operation of such working mechanisms (frequency of meetings, terms of reference, composition) should be defined.

Examples: Institutional Mechanisms

- In **Malawi**, the Central Agency Committee has a mandate to review all new policies to ensure their coherence.
- In **Uganda**, the National Planning Authority coordinates all planning processes.

- **Roles, human resources and accountability mechanisms.** The various government bodies should allocate roles (rights and responsibilities) and human resources within their institutions, and should delineate the corresponding accountability mechanisms and incentives. Establishing or strengthening environmental units and officers in sector ministries and subnational bodies is central to effective poverty-environment mainstreaming.

Examples: Human Resources

- In **the United Republic of Tanzania**, the Environment Management Act of 2004 mandated all sector ministries and agencies to set up environment units, although this is not yet functional.
- In **many countries**, environment officers work at the district level. It is important to support these officers in coordinating their efforts and in gaining the necessary skills and resources.

- **Procedures and systems.** Integrating poverty-environment linkages in government and administrative procedures and systems, and in the relevant bodies, is a necessary step for long-term results.

Examples: Procedures and Systems

- Budget call circulars
- Stakeholders' consultations, peer reviews and expenditure reviews
- Staff training
- Reporting and monitoring
- Parliamentary commissions

- **Approaches and tools.** Systematically using certain approaches and tools to monitor progress and raise awareness about poverty-environment mainstreaming is also recommended.

Examples: Approaches and Tools

- Regular working papers or policy briefs
- Studies and department reports
- National audits and monitoring programmes
- Communication tools
- Strategic environmental assessments and environmental impact assessments

Further Guidance: Examples

The success of this final activity depends to a large extent on the national experience and buy-in accumulated throughout the poverty-environment mainstreaming effort.

In addition, ongoing public reforms might be relevant, especially in building accountability and partnerships. Many development actors organize trainings and provide tools for institutional and capacity strengthening, and interested countries can make use of such instruments or cooperate with these partners in areas where it is needed. Box 6.10 provides examples from countries that have used national development processes as opportunities to strengthen their institutions and capacities.

Box 6.10 Strengthening Institutions and Capacities through National Development Processes

Ecuador: National dialogue rallies consensus on sustainable development. Under the aegis of Dialogue 21, information and communication tools have created a public space that has brought together social, political, governmental and economic forces around sustainable development. Together, a spectrum of people have built consensus in a crisis situation, engendering trust and changing previously confrontational and suspicious minds. External agencies played a facilitating role, used flexible and adaptive aid instruments, built on the practices of local institutions and inspired confidence among the different groups. The experience may offer a model for replication in other fragile States or post-crisis situations.

Kenya: The environment policy strengthens mainstreaming. The preparation of the Environment Policy in 2008 was led by a national steering committee composed of experts in the environment and development. The process drew on the participation of stakeholders from government, civil society, communities and politicians through thematic task forces and consultations. The policy intends to strengthen linkages between the environment sector and national development. Implementation will depend on sector plans and budgets. Thus, the approach focuses on strengthening the environmental institutions to engage with them, including with the finance and planning bodies.

Mozambique: Effective budget supports post-flood reconstruction. Following the floods and cyclones of 2000 and 2001, the government established a post-flood reconstruction programme, demonstrating its leadership and ability to rally the international community and perform efficiently and transparently. Strong commitment provided the incentive for donors to pledge significant resources and work largely through the national system, including the budget. This in turn helped strengthen accountability and transparency while avoiding complex funding arrangements. A parliamentary task force further ensured that the government was not only held accountable by its external partners but also by legislators.

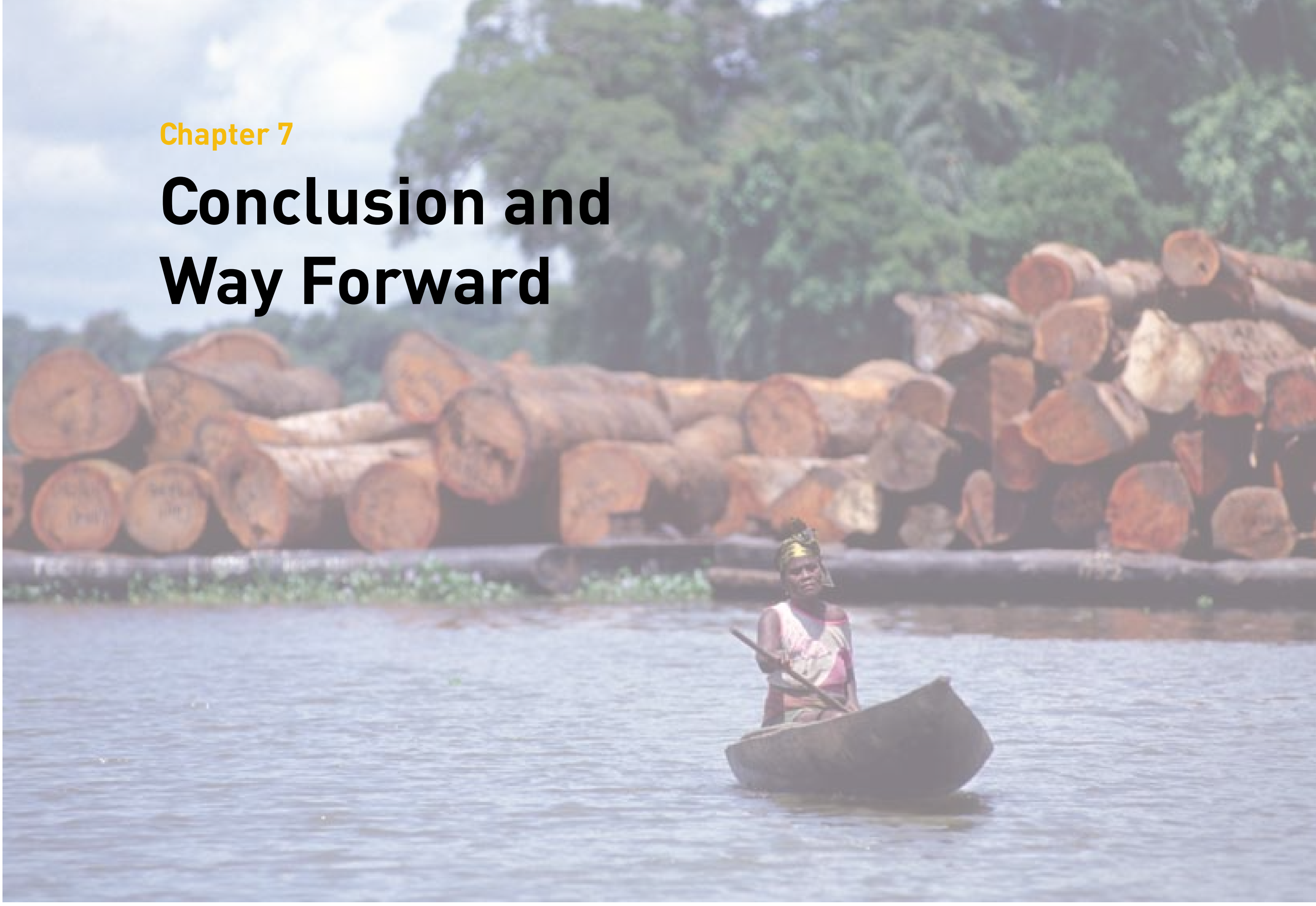
South Africa: Women analyse the budget and parliament takes their advice. The Women's Budget Initiative analyses allocations across sectors and assesses whether these are adequate to meet policy commitments. A collaborative venture involving parliament and civil society organizations, the initiative has a strong advocacy component, particularly around gender. Besides demonstrating how this kind of partnership can increase accountability and transparency in public expenditures, it shows how civil society expertise can complement public capacities—and, in the process, strengthen policy formulation overall.

United Republic of Tanzania: Sustainable incentives for civil servants help improve service delivery. Government and donors have come together to institutionalize a system of incentives within the public service. The Selective Accelerated Salary Enhancement scheme, part of the overall Public Service Reform Programme, offers a solution to salary incentive problems within the wider context of pay reform. Aimed at addressing low motivation, uncompetitive salary structures and capacity development, the scheme targets personnel with the greatest impact on service delivery. It provides an opportunity for donors to harmonize their practices around national systems and strives to reduce distortions in the local labour market.

Sources: Lopes and Theisohn 2003; UNDP-UNEP PEI n.d.

Table 6.3 Summary: What Does "Meeting the Implementation Challenge" Encompass?

Achievement	Examples
Poverty-environment indicators	• United Republic of Tanzania's indicators of poverty-environment linkages (Government of United Republic of Tanzania 2005a)
Integration of poverty-environment linkages in the monitoring system, including data collection and management	• Rwanda's *Poverty-Environment Indicators and Strategy for Monitoring Them within the Framework of the EDPRS* (UNDP-UNEP PEI Rwanda 2007a)
Budgeting and financing for poverty-environment issues	• Uganda's *Mainstreaming Environmental Issues into Budget Framework Papers: User's Manual* (UNDP-UNEP PEI Uganda 2007) • Increased revenues from the environment sector • Policy measures for poverty-environment issues budgeted for and financed at various levels • Execution of budget for poverty-environment mainstreaming, according to plan
Effective policy measures on poverty-environment issues	• Agricultural policy • District plans integrating poverty-environment linkages • Replication of successful policy measures
Establishment of poverty-environment mainstreaming as standard practice in government and administrative practices, procedures and systems	• Rwanda's *Guidelines for Mainstreaming Environment into the Economic Development and Poverty Reduction Strategy* (UNDP-UNEP PEI Rwanda 2007b) • Mandates, reporting and monitoring, training, budget call circulars • Strategy for long-term institutional and capacity strengthening
Involvement of stakeholders and development community	• Subnational bodies, private sector and local communities



Chapter 7

Conclusion and Way Forward

Based on experience to date, successful poverty-environment mainstreaming requires a sustained programmatic approach adapted to national circumstances. The framework proposed here consists of three components, each of which involves a set of activities for which a range of tactics, methodologies and tools can be used:

- **Finding the entry points and making the case** is concerned with setting the stage for mainstreaming, i.e., understanding the poverty-environment linkages and the governmental, institutional and political contexts in order to define pro-poor environmental outcomes on which to focus, find entry points into development planning and make the case for poverty-environment mainstreaming.
- **Mainstreaming poverty-environment linkages into policy processes** focuses on integrating poverty-environment issues into an ongoing policy process, such as a PRSP or sector strategy, based on country-specific evidence.
- **Meeting the implementation challenge** aims at ensuring poverty-environment mainstreaming into budgeting, implementation and monitoring and the establishment of poverty-environment mainstreaming as standard practice.

The programmatic approach recommended in this handbook should be viewed as a flexible model to help guide the choice of activities, tactics, methodologies and tools to deploy to address a particular country situation.

The approach also provides a flexible **framework for ongoing and future work** in the area of poverty-environment mainstreaming. In close collaboration with their partners, UNDP and UNEP plan to build on this handbook, and other guidance documents, in three areas:

- **Analytical work** that can support poverty-environment mainstreaming, such as institutional and capacity needs assessments, integrated ecosystem assessments, economic analyses, strategic environmental assessments, costing and budgeting
- **Poverty-environment mainstreaming from the perspective of a specific environmental issue**, such as climate change, sound chemicals management, sustainable land management, sustainable consumption and production, and water resource management
- **Poverty-environment mainstreaming targeted at priority development sectors** such as health, agriculture, fisheries, land management, forestry, water and sanitation, transport and energy, industrial development, trade and education

Because efforts to mainstream poverty-environment linkages into national development planning are ongoing in an increasing number of countries, the wealth of experience and lessons learned on poverty-environment mainstreaming will rapidly and exponentially accrue. To keep information current, UNDP and UNEP plan to update this handbook and to provide related guidance and technical support materials. For linkages to related documents produced by the UNDP-UNEP PEI team, please visit www.unpei.org.

It takes time and sustained effort to move poverty-environment concerns to the centre of development planning and implementation. But champions in many countries are making significant progress: environment agencies typically operating on the periphery of development have found entry points into national policymaking processes, the contribution of the environment has been systematically integrated into PRSPs, economic arguments have been used to convince decision-makers to increase investment and key sector agencies have factored poverty-environment linkages into their programmes at the subnational level.

By continuing this work, practitioners can help ensure that the environment and natural resources are managed in a way that reduces poverty, promotes sustainable economic growth and helps achieve the MDGs.

Abbreviations and Acronyms

CDM	Clean Development Mechanism
EDPRS	Economic Development and Poverty Reduction Strategy (Rwanda)
GDP	gross domestic product
GEF	Global Environment Facility
MDG	Millennium Development Goal
MKUKUTA	National Strategy for Growth and Reduction of Poverty (Mkakati wa Kukuza Uchumi na Kupunguza Umaskini) (United Republic of Tanzania)
NGO	non-governmental organization
OECD	Organisation for Economic Co-operation and Development
PEI	Poverty-Environment Initiative
PRSP	poverty reduction strategy paper
UNDP	United Nations Development Programme
UNEP	United Nations Environmental Programme

Glossary

benefit-cost ratio. The ratio of the discounted benefits to the discounted costs of an activity, project, programme or policy measure. If the ratio is one or greater, the present value of benefits is greater than the present value of costs; the activity, project, programme or policy measure therefore generates net benefits, i.e., is profitable (Dixon and Sherman 1991). *See also* **cost-benefit analysis**.

bequest value. The personal or social benefit received by the present generation from leaving a resource for future generations to enjoy or use. Bequest values are one of the reasons why present generations protect natural areas or species for future generations (Dixon and Sherman 1991).

budgeting. The process of deciding how much public spending should be committed in the future years or year and how it should be spent. The budgeting process differs enormously from one country to another and entails budget review, preparation, submission, allocation, approval, execution, and monitoring and reporting (Economist 2009). *See also* **medium-term expenditure framework**.

capacity assessment. An analysis of current capacities against desired future capacities, which generates an understanding of capacity assets and needs, which in turn leads to the formulation of capacity development strategies (UNDP 2007). *See also* **institutional and capacity strengthening**.

carbon trading. A market-based approach to achieve environmental objectives that allows those who are reducing greenhouse gas emissions below what is required to use or trade the excess reductions to offset emissions at another source inside or outside the country. In general, trading can occur at the intracompany, domestic and international levels. The Intergovernmental Panel on Climate Change's Second Assessment Report adopted the convention of using "permits" for domestic trading systems and "quotas" for international trading systems. Emissions trading under Article 17 of the Kyoto Protocol is a tradable quota system based on the assigned amounts calculated from the emission reduction and limitation commitments listed in Annex B of the Protocol (IPCC 1995; UNFCCC 1998). *See also* **Clean Development Mechanism**.

champion (poverty-environment). Practitioner who takes on the role of advocating the integration of poverty-environment considerations into development planning at national, sector and subnational levels. Champions include high-level decision-makers and government officials who serve as ambassadors for poverty-environment mainstreaming.

civil society. The voluntary civic and social components of society. In 1992, at the United Nations Conference on Environment and Development, governments agreed on the following definition of major civil society groups: farmers, women, the scientific and technological community, children and youth, indigenous peoples and their communities, workers and trade unions, business and industry, non-governmental organizations and local authorities. Since then, the concept of civil society has continued to evolve, with different views of how it should be defined. In relation to the environmental field, civil society can be categorized under the following groups: service delivery, representation, advocacy and policy inputs, capacity-building and social functions (UNEP 2004). *See also* **non-governmental actor** and **stakeholder**.

Clean Development Mechanism (CDM). A mechanism under the Kyoto Protocol that allows industrialized countries with a greenhouse gas reduction commitment to invest in projects that reduce emissions in developing countries as an alternative to more expensive emission reductions in their own countries. In practice this means that industrialized countries finance investments in the fields of renewable energy (e.g. wind, hydropower and biomass energy), improved industrial processes and energy efficiency, improved waste management (e.g. landfill gas) or agriculture in developing countries (UNFCCC 2008a). *See also* **carbon trading**.

climate change. A statistically significant variation in either the mean state of the climate or in its variability, persisting for an extended period (typically decades or longer). The United Nations Framework Convention on Climate Change, in Article 1, defines climate change as "a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods." The Convention thus makes a distinction between climate change attributable to human activities altering the atmospheric composition and climate variability attributable to natural causes (IPCC 2009).

climate change adaptation. Adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities. Various types of adaptation can be distinguished, including anticipatory, autonomous and planned adaptation (IPCC 2009).

climate change mitigation. Any anthropogenic intervention to reduce the sources or enhance the sinks of greenhouse gases (IPCC 2009).

cost-benefit analysis. A comparative analysis of the present value of the stream of economic benefits and costs of an activity, project, programme or policy measure over some defined period of time (the time horizon). A boundary of the analysis is also defined in order to indicate what effects are included in the analysis. The results of the cost-benefit analysis are usually presented in terms of a net present value, a benefit-cost ratio or an internal rate of return, which is the discount rate at which the present value of benefits exactly equals the present value of costs. If the internal rate of return is higher than the cost of capital or a predetermined rate of interest, the project, programme or policy measure is profitable (Dixon 2008; Dixon and Sherman 1991). *See also* **economic analysis**.

cost-effectiveness analysis. A technique of analysis that makes an attempt to estimate benefits and focuses on the least-cost means of reaching a goal. This approach is commonly used for social or environmental projects, programmes and policies in which the benefits of reaching a goal are difficult to value or hard to identify (Dixon 2008; Dixon and Sherman 1991). *See also* **economic analysis**.

costing. The process of evaluating, through estimates, mathematical models and prediction of future needs, how much the implementation of a specific policy measure or the achievement of a goal or target through a set of policy measures will cost.

economic analysis. The broad process of studying and understanding trends, phenomena and information that are economic in nature. Economic analysis can quantify the contribution of the environment to a country's economy, through revenues, job creation and direct and indirect use of the resources by the population. By demonstrating the multiple values of the environment, expressed both in monetary and broader non-monetary terms, economic analysis can help persuade key decision-makers that the sustainable management of the environment will help them achieve development goals, such as poverty reduction, food security, adaptation to climate change and other measures of human well-being. *See also* **cost-benefit analysis**, **cost-effectiveness analysis** and **environmental valuation**.

economic development. Qualitative change and restructuring in a country's economy in connection with technological and social progress. The main indicator of economic development is increasing gross domestic product (GDP) per capita (or gross national product per capita), reflecting an increase in the economic productivity and average material well-being of a country's population. Economic development is closely linked with economic growth (World Bank 2004a).

ecosystem. A dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit (MA 2005). Ecosystems have no fixed boundaries; instead, their parameters are set according to the scientific, management or policy question being examined. Depending upon the purpose of analysis, a single lake, a catchment area or an entire region could be an ecosystem (WRI 2005).

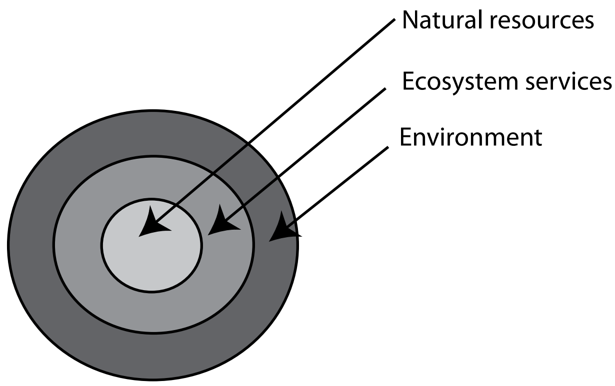
ecosystem services. The benefits people obtain from ecosystems. These include:

- **provisioning services.** The products obtained from ecosystems, including, for example, genetic resources, food and fibre, and freshwater
- **regulating services.** The benefits obtained from the regulation of ecosystem processes, including, for example, the regulation of climate, water and some human diseases
- **cultural services.** The nonmaterial benefits people obtain from ecosystems through spiritual enrichment, reflection, recreation and aesthetic experience, including, for example, knowledge systems, social relations and aesthetic values
- **supporting services.** The services necessary for the production of all other ecosystem services, including, for example, biomass production, production of atmospheric oxygen, soil formation and retention, nutrient cycling, water cycling and provision of habitat

The human species, while buffered against environmental changes by culture and technology, is fundamentally dependent on the flow of ecosystem services (MA 2005). *See also* **environment** and **natural resource**.

entry point. An opportunity for influencing decision-makers to consider poverty-environment issues in the process at stake. Possible entry points include the formation or revision of a poverty reduction strategy paper (PRSP), a national development plan, a national development strategy based on the Millennium Development Goals (MDGs) or related implementation processes. The development and revision of sector strategies or plans, such as an agricultural sector plan, constitute another opportunity. Likewise, the start of the national budget allocation process or review (e.g. medium-term expenditure review) or the launch of relevant national consultation processes can prove to be excellent entry points for poverty-environment mainstreaming.

environment. The living (biodiversity) and non-living components of the natural world, and the interactions between them, that together support life on earth. The environment provides goods (*see also* **natural resource**) and services (*see also* **ecosystem services**) used for food production, the harvesting of wild products, energy and raw materials. The environment is also a recipient and partial recycler of waste products from the economy and an important source of recreation, beauty, spiritual values and other amenities (DFID et al. 2002). On the other hand, the environment is subject to environmental hazards such as natural disasters, floods and droughts and environmental degradation (e.g. soil erosion, deforestation).



environmental accounting. The consideration of the value of the environment in both national accounting and corporate accounting. National accounting refers to the physical and monetary accounts of environmental assets and the costs of their depletion and degradation. Corporate accounting usually refers to environmental auditing, but may also include the costing of environmental impacts caused by a corporation (OECD 1997).

environmental fiscal reform. Taxation and pricing instruments aimed at improving environmental management, including taxes on the exploitation of natural resources (e.g. forests, minerals, fisheries), user charges and fees (e.g. water charges, street parking fees, permits or licences on environment and natural resources), taxes or charges on polluting emissions (e.g. air pollution) and reforms to subsidies (e.g. on pesticides, water, energy).

environmental impact assessment. A study done to determine the probable environmental impacts (positive and negative) of a proposed project, to assess possible alternatives and to create environmental mitigation plans for a project that may have significant negative environmental impacts (UNEP 2007b).

environmental mainstreaming. The integration of environmental considerations into policies, programmes and operations to ensure their sustainability and to enhance harmonization of environmental, economic and social concerns (European Commission 2007).

environmental sustainability. The longer-term ability of natural and environmental resources and ecosystem services to support continued human well-being. Environmental sustainability encompasses not just recognition of environmental spillovers today, but also the need to maintain sufficient natural capital to meet future human needs (WRI 2005).

environmental valuation. The process of placing monetary value on environmental goods or services that do not have accepted prices or where market prices are distorted. A wide range of valuation techniques exist and are suited to address different issues (e.g. survey-based techniques, changes in production, hedonic approaches and surrogate markets) (Dixon 2008; Dixon and Sherman 1991). *See also* **economic analysis**.

genuine savings. Savings (income not used for current consumption) achieved once depletion of natural resources and environmental damages are subtracted from the gross savings of a country (World Bank 2004a).

gross domestic product (GDP). The total final output of goods and services produced within a country's borders, regardless of whether ownership is by domestic or foreign claimants (Dixon and Sherman 1991).

household poverty assessment. Collection and analysis of data on the determinants of poverty. Increasingly this includes environment factors such as access to water and energy (Brocklesby and Hinshelwood 2001).

institutional and capacity strengthening or development. The process through which the abilities of individuals, organizations and societies to perform functions, solve problems, and set and achieve objectives in a sustainable manner are obtained, strengthened, adapted and maintained over time. It entails building relationships and values that will enable individuals, organizations and societies to improve their performance and achieve their development objectives. This includes change within a State, civil society or the private sector, and change in processes that enhance cooperation between different groups of society. Capacity development is a concept broader than organizational development as it includes an emphasis on the overall system, environment or context within which individuals, organizations and societies operate and interact. *See also* **capacity assessment**.

integrated ecosystem assessment. An assessment of the condition and trends in an ecosystem; the services it provides (e.g. clean water, food, forest products and flood control); and the options to restore, conserve or enhance the sustainable use of that ecosystem through integrated natural science and social science research methods (MA 2005).

integrated policymaking for sustainable development. A process that incorporates the main objectives of sustainable development—economic development, poverty reduction and environmental protection—into policy actions. Integrated policymaking for sustainable development goes beyond assessment and evaluation by extending to the whole process including agenda setting, policy formulation, decision-making, implementation and evaluation (UNEP 2008a).

livelihood. The assets and activities required for a means of living. The assets might consist of individual skills and abilities (human capital), land, savings and equipment (natural, financial and physical capital, respectively) and formal support groups or informal networks that assist in the activities being undertaken (social capital). A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base (DFID 2001).

mainstreaming. The process of systematically integrating a selected value, idea or theme into all domains of an area of work or system. Mainstreaming involves an iterative process of change in the culture and practices of institutions (DFID et al. 2002).

market failure. A situation in which market outcomes are not efficient. Market failure occurs when prices do not completely reflect the true social costs or benefits. In such cases, a market solution results in an inefficient or socially undesirable allocation of resources. If the benefits of protected areas are underestimated, for example, a smaller amount of area will be protected than is socially desirable (OECD 1997; Dixon and Sherman 1991).

medium-term expenditure framework. A budgeting system comprising a top-down estimate of aggregate resources available for public expenditure in the medium term consistent with macro-economic stability; bottom-up estimates of the cost of carrying out policies, both existing and new; and a framework that reconciles these costs with aggregate resources. It is called "medium-term" because it provides data on a prospective basis for the budget year ($n+1$) and for following years ($n+2$ and $n+3$). The framework is a rolling process repeated every year and aims at reducing the imbalance between what is affordable and what is demanded by line ministries. The term used differs by country; besides "medium-term expenditure framework," other terms that may be applied include multi-year expenditure framework, multi-year budget, forward budget, multi-year estimates and forward estimates (Petkova and Bird 2008). *See also* **budgeting**.

Millennium Ecosystem Assessment. A global assessment of the earth's ecosystems and the consequences of ecosystem change for human well-being, commissioned by the United Nations Secretary-General. From 2001 to 2005, the assessment involved the work of more than 1,300 experts worldwide. Their findings provide a state-of-the-art scientific appraisal of the condition of and trends in the world's ecosystems and the services they provide, and the scientific basis for action to conserve and use them sustainably. The work was completed in 2005 with the publication of a report (MA 2005, 2007).

national adaptation programme of action. A process for least developed countries to identify priority activities that respond to their urgent and immediate needs with regard to adaptation on climate change. The programme takes into account existing coping strategies at the grass-roots level and builds upon these to identify priority activities. The Global Environment Facility is the financial mechanism for national adaptation programmes of action (UNFCCC 2008b).

national communication. A national report by the Parties to the United Nations Framework Convention on Climate Change to the conference of the parties. The core elements of the national communications are information on emissions and removal of greenhouse gases and details of the activities of the implementation of the Convention. Generally national communications contain information on national circumstances, vulnerability assessment, financial resources and transfer of technology; and education, training and public awareness. The Global Environment Facility provides financial assistance to the non-Annex I countries for the preparation of their national communications (UNFCCC 2008c).

national development planning. A comprehensive process from elaboration of a plan until implementation, by which economic development is organized around a coherent framework of objectives and means. In the context of poverty-environment mainstreaming planning encompasses preparatory work (e.g. carrying out assessments and setting up working mechanisms); policymaking (including public and policy reforms); and budgeting, implementation and monitoring, at various levels: national, sector and subnational.

natural resource. A natural asset (including raw materials) occurring in nature that can be used for economic production or consumption (OECD 1997). *See also* **environment** and **ecosystem services**.

net present value. The present-day value of the benefits and costs of a project, programme or policy measure that occur over a defined time horizon. A discount rate is used to reduce future benefits or costs to their present equivalent. The net present value is expressed in monetary terms and indicates the magnitude of net benefits generated by a project over time. A net present value greater than zero implies positive net benefits (Dixon and Sherman 1991). *See also* **cost-benefit analysis**.

non-governmental actor. Any actor that is not part of the government, in the broadest sense, including representatives of civil society, academia, business and industry, the general public and local communities, and the media. *See also* **civil society** and **stakeholder**.

payment for ecosystem/environmental services. Any of a variety of arrangements through which the beneficiary of ecosystem services compensates the providers of those services. Payment schemes may be a market arrangement between willing buyers and sellers, intermediated by a large private or public entity or government driven (WWF 2008).

policy. A high-level strategic plan embracing general goals, targets and implementation strategies. Examples of policy documents include poverty reduction strategy papers (PRSPs), Millennium Development Goal (MDG) strategies, and sector and subnational strategies and plans.

policy measure. An intervention supporting new policies or changes to existing policies, as well as broader sector (e.g. agriculture policy) and public reforms (e.g. participation in the decision-making process) aimed at improving environmental management for the benefit of the poor. Policy measures can take place at the national, sector or subnational level.

poverty. A multidimensional concept of deprivation including lack of income and other material means; lack of access to basic social services such as education, health and safe water; lack of personal security; lack of empowerment to participate in the political process and in life-affecting decisions; and extreme vulnerability to external shocks (DFID et al. 2002).

poverty-environment indicator. A measure of poverty-environment linkages, whether these linkages represent causal relationships between poverty and the environment or describe how environmental conditions affect the livelihoods, health and resilience of the poor to environmental risks or broader economic development.

poverty-environment linkage. The close relationship that exists between poverty and environmental factors, as reflected in livelihoods, resilience to environmental risks, health and economic development. Poverty-environment linkages are dynamic and context specific, reflecting geographic location, scale and the economic, social and cultural characteristics of individuals, households and social groups. The sex and age of the head of the household (female or male, adult or young person) are key factors influencing poverty-environment linkages (Brocklesby and Hinshelwood 2001; UNDP and European Commission 2000; UNDP-UNEP PEI 2007).

poverty-environment mainstreaming. The iterative process of integrating poverty-environment linkages into policymaking, budgeting and implementation processes at national, sector and subnational levels. It is a multi-year, multi-stakeholder effort grounded in the contribution of the environment to human well-being, pro-poor economic growth and achievement of the Millennium Development Goals. It entails working with government actors (head of state's office, environment, finance and planning bodies, sector and subnational bodies, political parties and parliament, national statistics office and judicial system), non-governmental actors (civil society, academia, business and industry, the general public and local communities and the media) and development actors.

poverty-environment monitoring. The continuous or frequent standardized measurement and observation of poverty-environment linkages, for example for warning and control (OECD 1997).

poverty reduction strategy paper (PRSP). Country-led, country-written document that provides the basis for assistance from the World Bank and the International Monetary Fund, and debt relief under the Heavily Indebted Poor Countries Debt Initiative. A PRSP describes a country's macroeconomic, structural, and social policies and programmes to promote growth, and the country's objectives, policies, interventions and programmes for poverty reduction (UNEP 2007b). Country-led PRSPs describing national objectives, policies, interventions and programmes are considered as policy documents.

practitioner. Any stakeholder, government or non-government, actively engaged in the environment, development and poverty reduction fields.

programmatic approach. A medium- or long-term approach that includes a set of activities building on each other and contributing to the aim of achieving synergies and longer-term outcomes.

pro-poor economic growth. Growth that benefits poor people in absolute terms, taking into account the rate of growth and its distributional pattern (Kraay 2003; World Bank 2007b). Ignoring the quality of growth and particularly the erosion of the environmental assets of the poor undermines growth itself and its effectiveness in reducing poverty, even if it may enhance short-term economic gains (DFID et al. 2002).

public expenditure review. A review of the public budget, within the context of public sector issues in general, that typically analyses and projects tax revenue; determines the level and composition of public spending; assesses inter- and intrasectoral allocations (agriculture, education, health, roads); and reviews financial and non-financial public enterprises, the structure of governance and the functioning of public institutions (World Bank 2007b).

stakeholder. Any party involved in a particular process, including any group or individual who has something at stake in the process. Stakeholders include government actors (head of state's office, environment, finance and planning bodies, sector and subnational bodies, political parties and parliament, national statistics office and judicial system), non-governmental actors (civil society, academia, business and industry, the general public and local communities, and the media); and the development community. *See also* **civil society** and **non-governmental actor**.

strategic environmental assessment. Any of a range of analytical and participatory approaches that aim to integrate environmental considerations into policies, plans and programmes and evaluate the interlinkages with economic and social considerations.

This family of approaches uses a variety of tools adapted and tailored to the context or policy process to which they are applied (OECD 2006a). Used in the context of poverty-environment mainstreaming, a strategic environmental assessment can also be useful in systematic review of a policy process or document to identify poverty-environment contributions and refine priorities accordingly.

sustainable consumption and production. The production and use of goods and services that respond to basic needs and provide a better quality of life while minimizing the use of natural resources, toxic materials, and emissions of waste and pollutants over the life cycle so as not to jeopardize the environment's ability to meet the needs of future generations (Norwegian Ministry of Environment 1994).

sustainable development. Development that meets the needs of the present without compromising the ability of future generations to meet their own needs (Brundtland 1987). Sustainable development includes economic, environmental and social sustainability, which can be achieved by rationally managing physical, natural and human capital (UNEP 2007b).

twinning. A framework through which organizations can work with their counterparts in a different country or region for mutual benefit through a direct exchange of national experiences of best practice. Twinning is normally used as a mechanism for institutional and capacity strengthening to develop the administrative structures, human resources and management skills needed to manage or implement a specific action or project. Twinning can involve study visits and the exchange of experts, but it can also be conducted in the form of "eTwinning"—a Web-based exchange of national experiences (European Commission 2008).

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Index

F

G

H

I

K

L

M

N

O

P

R

S

Experience continues to show the vital contribution better environmental management can make to improving health, resilience to environmental risks, economic development and livelihood opportunities, especially for the poor. To create the kind of world we want, to fight poverty and to preserve the ecosystems that poor people rely on, pro-poor economic growth and environmental sustainability must be placed unequivocally at the heart of our most fundamental policies, systems and institutions.

One way to do this is through the process that has come to be known as poverty-environment mainstreaming. This essentially aims to integrate the linkages between the environment and poverty reduction into government processes and institutions, thereby changing the very nature of its decision-making culture and practices.

This handbook is designed to serve as a guide for champions and practitioners engaged in the painstaking task of mainstreaming poverty-environment linkages into national development planning. It draws on a substantial body of experience at the country level and the many lessons learned by the United Nations Development Programme and the United Nations Environment Programme in working with governments—especially ministries of planning, finance and environment—to support efforts to integrate the complex interrelationships between poverty reduction and improved environmental management into national planning and decision-making.

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