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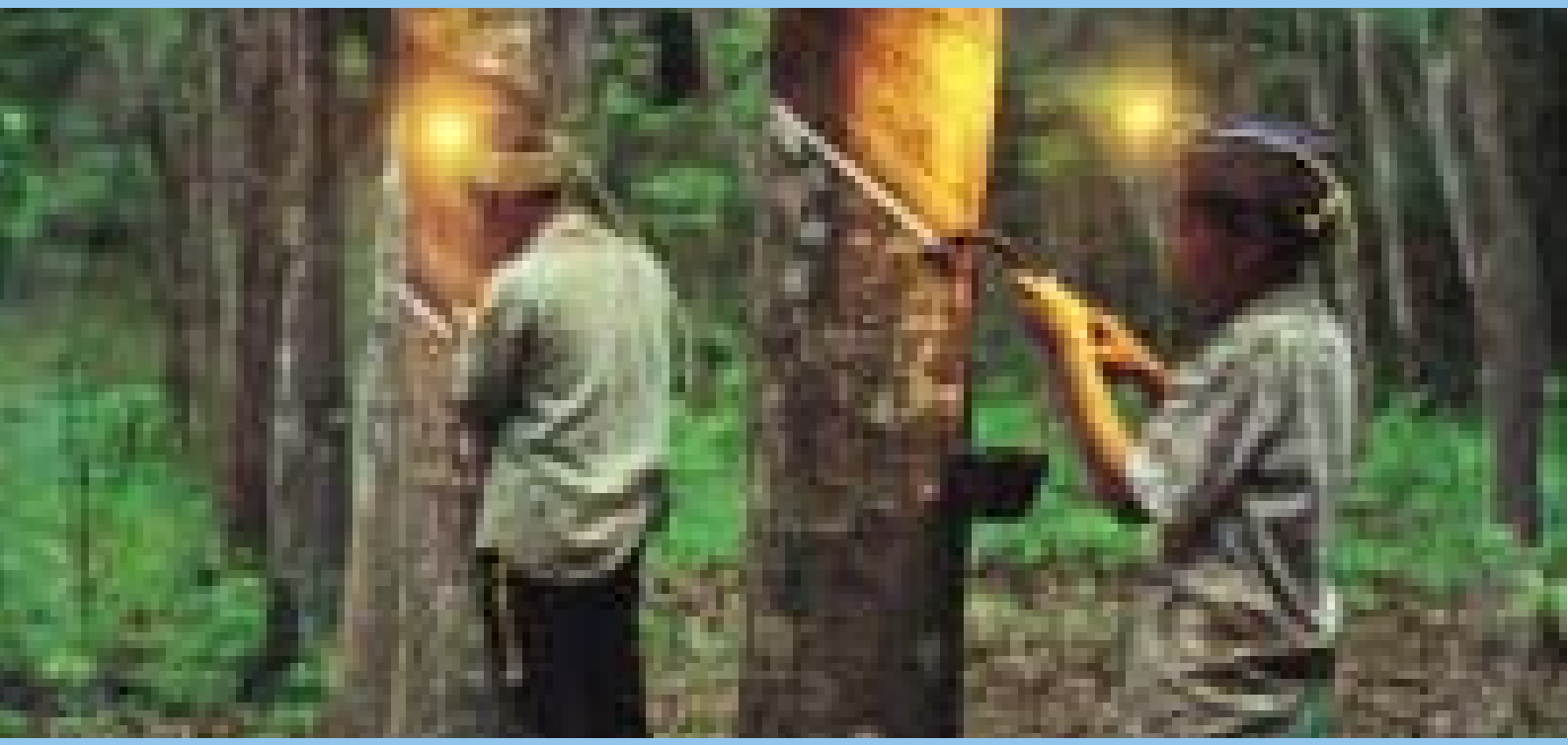

MAINSTREAMING POVERTY-ENVIRONMENT LINKAGES INTO DEVELOPMENT PLANNING: A Handbook for Practitioners

UNEP

UNDP-UNEP Poverty-Environment Initiative

UNDP

Environment for the MDGs

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Facility.unpei@unpei.org
UNDP-UNEP Poverty-Environment Facility
UN Gigiri Compound, United Nations Avenue
P.O. Box 30552-00100, Nairobi, Kenya

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 (MA 2005).

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 and thereby change 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.

Angela Cropper
Officer-in-Charge
Division of Regional Cooperation
United Nations Environment Programme

Veerle Vandeweerd
Director
Environment and Energy Group
United Nations Development Programme

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 as well as 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 recognised as a key factor in enduring economic development and improvement in human welfare, as well as a necessary condition for reaching the Millennium Development Goals (MDGs). These and other poverty-environment links 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 sub-national 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 government actors (head of state's office; environment, finance, and planning bodies; sector and sub-national bodies; political parties and parliament; 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.

The handbook lays out a programmatic approach to mainstreaming poverty-environment linkages into national 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 to mainstream poverty-environment linkages into national development planning. 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 which can be adapted to national circumstances to guide the choice of activities, tactics, methodologies, and tools to address a particular country situation**. It is comprised of the following elements:

- Finding the Entry Points and Making the Case
- Mainstreaming Poverty-Environment Linkages into Policy Processes
- Meeting the Implementation Challenge

Each of these involves a set of activities for which a range of methodologies and tools can be used. Stakeholder engagement occurs throughout, from inception through policy development, implementation, and monitoring. Each successive activity builds on previous work, but the chronology is not fixed. Rather, mainstreaming poverty-environment links 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 for the integration of poverty-environment considerations into development planning at national, sector, and sub-national 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 sub-national bodies; political parties and parliament; 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 (UN) agencies, including UN resident coordinators and country teams that engage with governments on national development priorities, including the preparation of UN Development Assistance Frameworks. Their work is often concerned with mainstreaming poverty-environment links, 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. Hyperlinks to a glossary of terms are also provided in the digital version.

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 elements. It highlights the role of stakeholders and the development community, as well as UNDP-UNEP expertise in this area.

Chapters 4 through 6 detail the three elements of the programmatic approach. Each chapter presents step-by-step guidance, provides references and illustrative cases, and concludes with key outputs 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 develop country-specific evidence using such techniques as integrated ecosystem assessments (IEAs) 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 for '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 sub-national levels; and how to strengthen institutions and capacities to sustain the effort.

Chapter 7 puts forth some proposals for future work in the area of poverty-environment mainstreaming.

The handbook also contains a list of 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 important for human well-being, pro-poor economic growth, and achievement of the Millennium Development Goals (section 2.2)
- Highlights the importance of natural capital to the wealth of low-income countries (section 2.3) and to climate change (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 What Is Poverty-Environment Mainstreaming?

Achieving this vision of 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 to mainstream the environment into national planning—for example, through the Poverty Reduction Strategy Papers (PRSPs) that served many countries as their primary economic development planning development tool—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 and did not go far enough. A series of influential reviews by the World Bank showed that most of the PRSPs adopted by many of 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).

Definition: Poverty-environment mainstreaming

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

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.

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 for the poor, especially women and marginalised populations.

These efforts have taken on particular urgency as development assistance increasingly takes the form of general budget 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 Why Mainstream Poverty-Environment Linkages?

The well-being and economic prosperity of poor people can be greatly improved through better management of natural resources. Although a number of development organisations initially promoted the mainstreaming of environmental conservation as a stand-alone issue, experience has proven that focusing on the linkages between poverty reduction and improved environmental management is a more effective approach

to mainstreaming and produces more 'win-win' outcomes. 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 percent of the population rely on solid fuels, such as charcoal and firewood, for their energy needs.
- In **Bolivia**, over 80 percent 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 percent of the active workforce is employed in agriculture and fisheries, and hence depend for their well-being on the sustainable management of these resources.
- In **Latin America and Southeast Asia**, 100 percent of the poor living on less than USD 1 per day are exposed to indoor air pollution.
- In central **Viet Nam**, following disaster 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 Environment Contributes to Livelihoods, Resilience, Health, and Economic Development

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

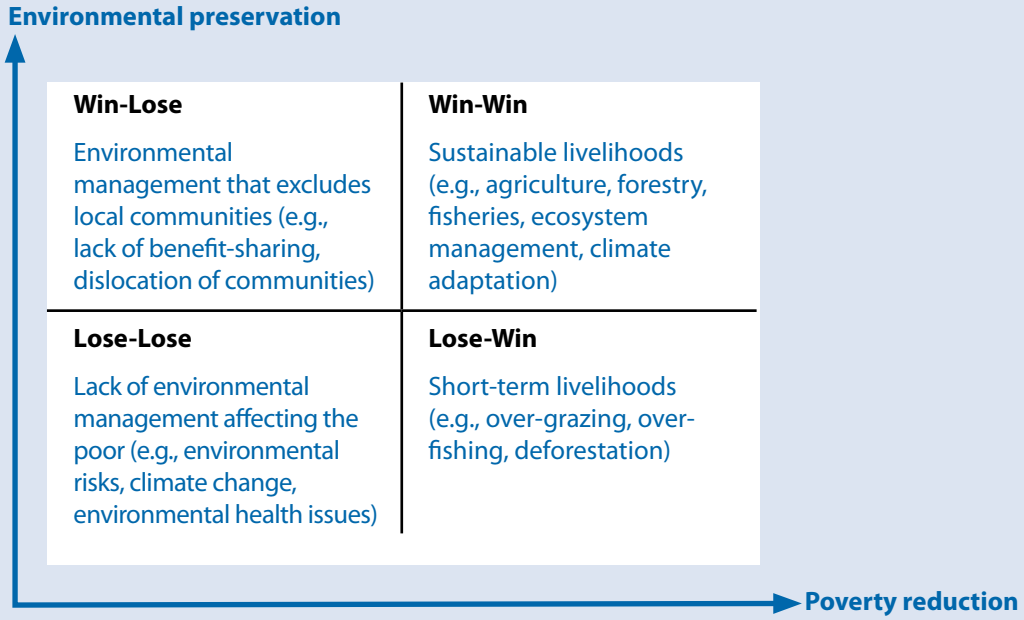
- **Livelihoods.** Ecosystems provide services (including provisioning services such as food and fresh water, regulating services such as the regulation of climate and water and air quality, cultural services such as recreation and aesthetic enjoyment, and supporting services needed to produce all other 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, both through 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 play a role in more than 80 percent of the diseases regularly reported on by the World Health Organization. Globally, nearly one-quarter of all deaths and of the world's total disease burden can be attributed to environmental factors. 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 gender and age of the head of household (that is, whether the head is a woman, man, or child) are key factors influencing poverty-environment links.

Poverty-environment linkages can be positive or negative, creating vicious or virtuous circles for environmental preservation and poverty reduction (see 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 environment sustainability.

Figure 2.1 Examples of Positive and Negative Poverty-Environment Linkages



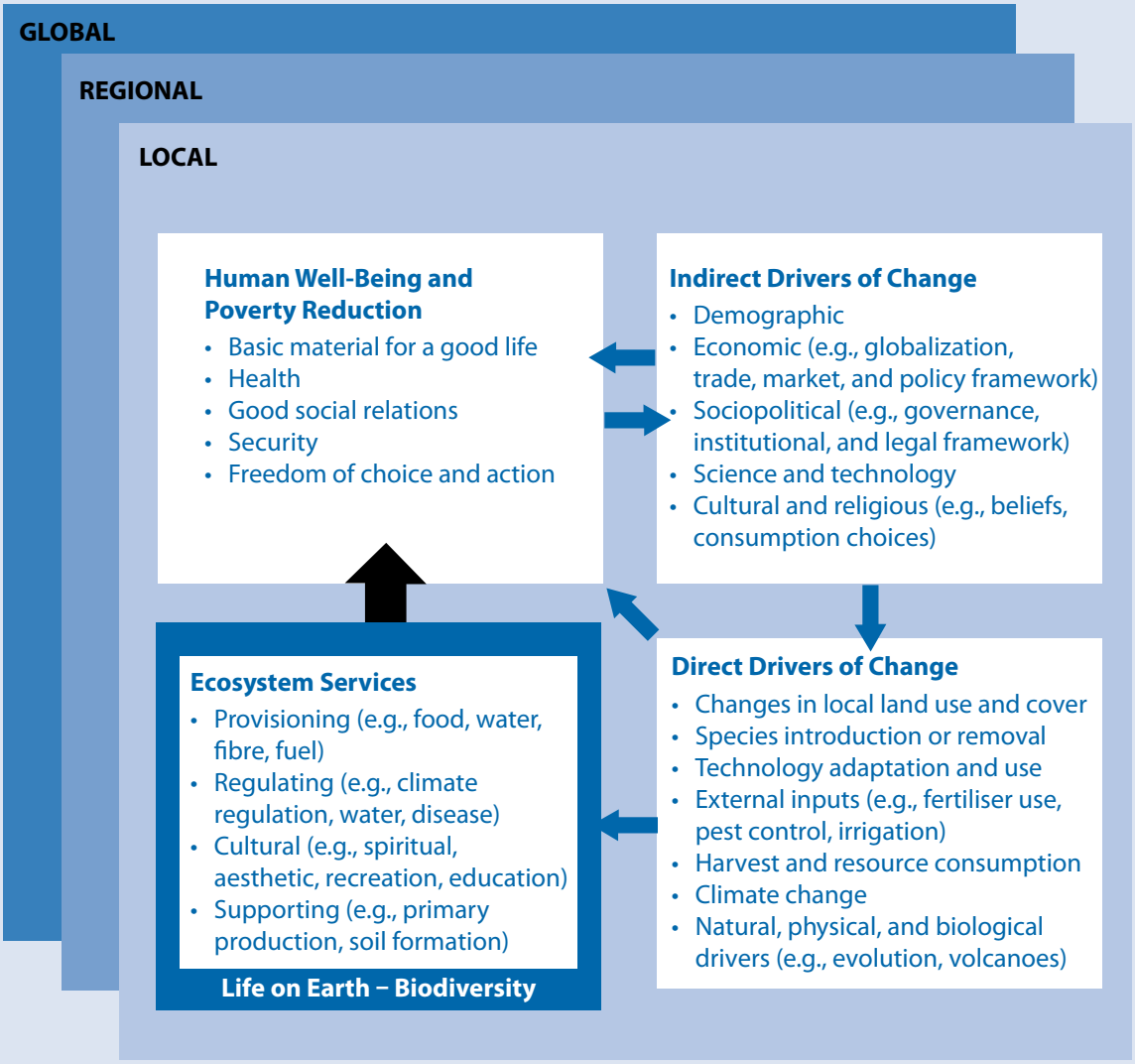
Ecosystem Services Contribute to Human Well-Being

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 (MA), 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 MA, 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 fertiliser 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 and/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

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



→ Strategies and interventions.

Source: MA 2005.

climate change, and indirectly affect countries and people across 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 Environment Contributes 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, as well as 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 risk—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 fuel wood, 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 in particular 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 and/or from carrying heavy loads of water and fuel wood 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, flooding, 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 the capacity to adapt to climate change as well as to address other environmental challenges, such as water and waste management.

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

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 (see 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	**USD per capita**	**% share**	**USD per capita**	**% share**	**USD 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 optimise 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. Similarly, reserving natural capital will strengthen countries' capacity to adapt to the stresses and risks that accompany climate change.

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 risks to 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 links into national development planning. Among the issues decision-makers need to consider are the effects of climate change on poverty and growth as well as 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, and/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 minimise 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)
- Reviews UNDP and UNEP poverty-environment mainstreaming–related initiatives (section 3.3)

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 inter-linkages 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 sub-national planning and investment.

The programmatic approach the UNDP-UNEP Poverty-Environment Initiative recommends for mainstreaming poverty-environment linkages into national development planning is composed of three elements:

- **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 links into an ongoing policy process, such as a Poverty Reduction Strategy Paper or sector strategy, based on country-specific evidence
- **Meeting the Implementation Challenge**, which is aimed at ensuring integration of poverty-environment links into budgeting, implementation, and monitoring processes

Using this approach can help in prioritising 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. 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. Figure 3.1 groups the activities that can take place throughout the mainstreaming effort.

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 element 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: Flexible 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 (see figure 3.2). Box 3.1 provides a checklist of outcomes to be achieved throughout the approach's application.

Figure 3.1 Programmatic Approach to Poverty-Environment Mainstreaming

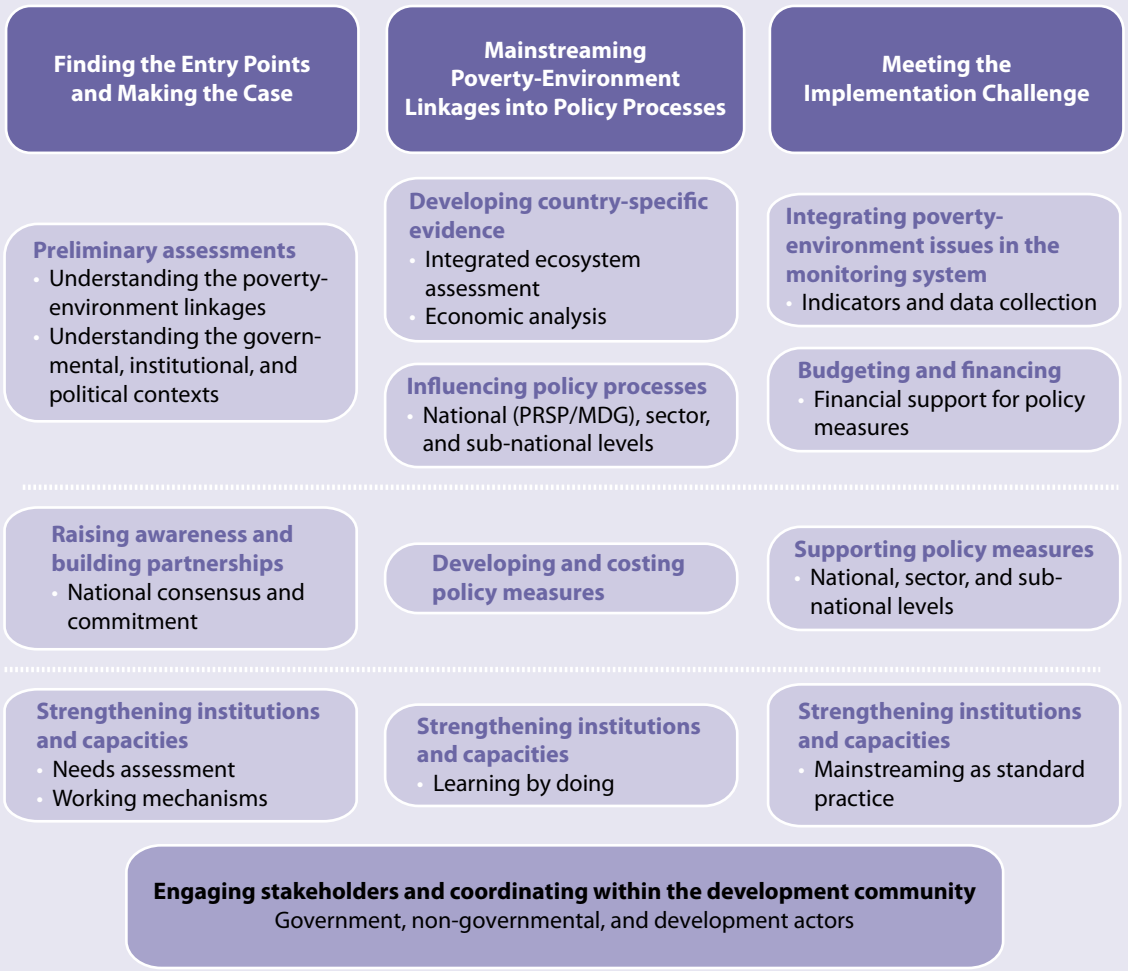
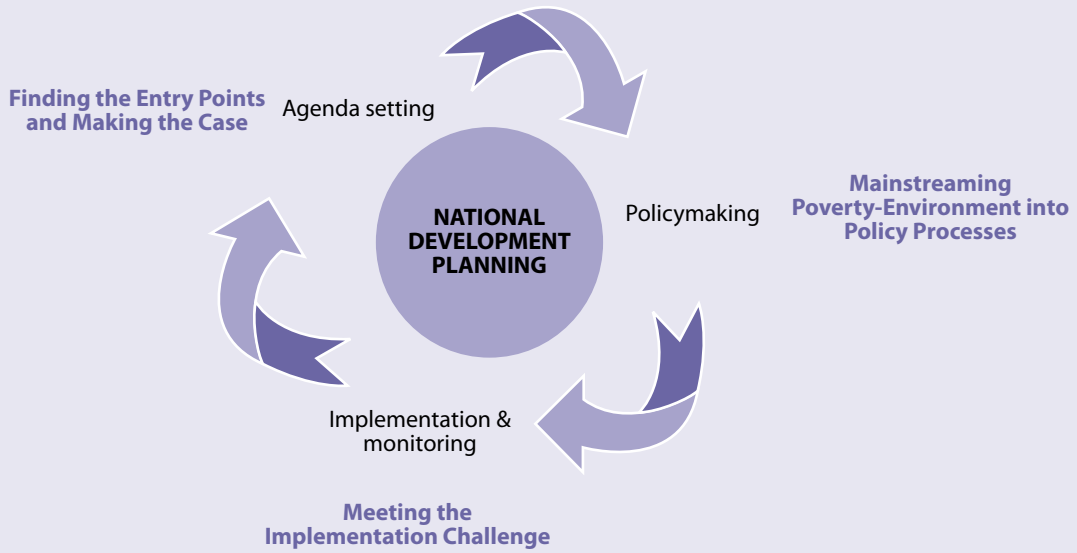


Figure 3.2 Relationship of the Programmatic Approach to the National Development Planning Cycle



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 roadmap taken into account in the work plan 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 work plan for the following stage of the effort

Mainstreaming Poverty-Environment Linkages into Policy Processes

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

Meeting the Implementation Challenge

- ✓ Poverty-environment indicators linked to policy documents of national development planning integrated in the national poverty monitoring system
- ✓ Increased budget allocations for poverty-environment policy measures of non-environment ministries and sub-national bodies
- ✓ Increased public expenditures for poverty-environment policy measures of non-environment ministries and sub-national bodies
- ✓ Increased in-country donor contributions for poverty-environment issues
- ✓ Poverty-environment mainstreaming established as standard practice in government and administrative procedures, systems, and tools (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
- ✓ Simultaneous improvement in environmental sustainability and poverty reduction, as measured by poverty-environment indicators

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 links and vulnerability to climate change in the country as well as assessments that increase understanding of the country's governmental, institutional, and political contexts. This entails identifying pro-poor environmental outcomes to be achieved as well as governance, institutional, and development factors that affect planning and decision-making at national, sector, and sub-national 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 as well as possible champions for poverty-environment mainstreaming.
- **Raise awareness and build partnerships.** The preliminary assessments described above provide the information needed to raise 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, as well as bring the environmental institutions into the planning process.
- **Assess 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 links 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.

- **Develop 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 case from different perspectives. Such studies might include integrated ecosystem assessments and/or 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 linking with National Communications and National Adaptation Programmes of Action produced under the United Nations Framework Convention on Climate Change.

- **Influence policy processes.** The development 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 as well as 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 links 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 (focusing, for example, on agricultural legislation, promotion of renewable energy, or the conservation of protected areas) or sub-national 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 whilst strengthening institutions and national capacity.

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.

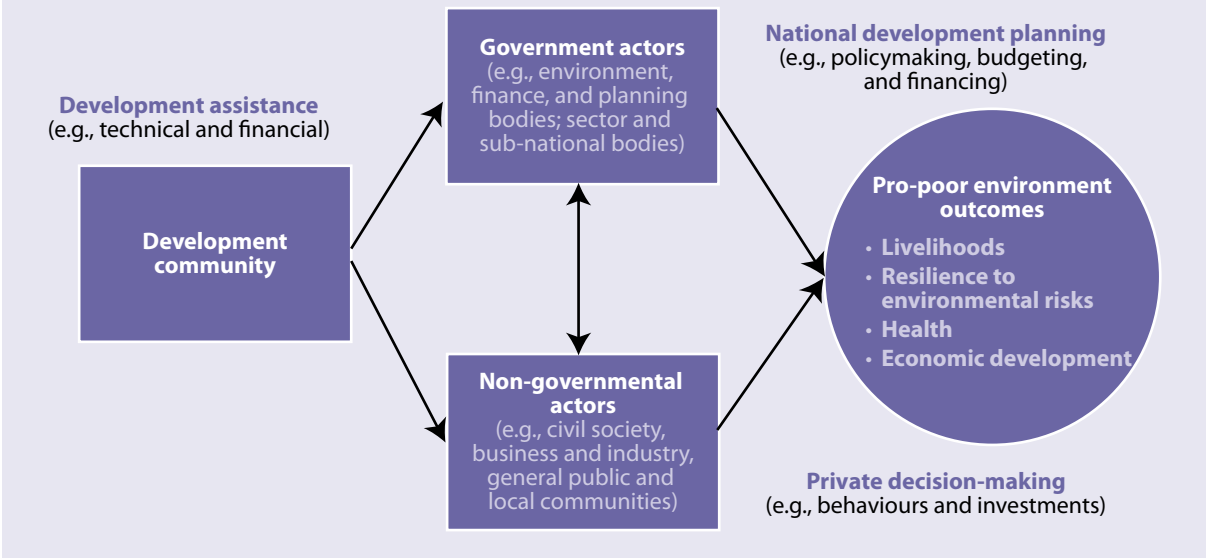
- **Integrate poverty-environment linkages in the monitoring system.** The integration of these links in the national monitoring system enables a country to track trends and the impact of policies as well as emerging issues such as climate change. Building on the sector-specific goals and targets included 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 links 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 sub-national levels.** This activity involves collaborating with sector and sub-national bodies to build their capacities to mainstream poverty-environment links within their work and effectively implement policy measures at various levels.
- **Strengthen institutions and capacities.** In tandem with other aspects of the work, the overall objective remains to strengthen institutions and capacities in the long term. It is thus critical to establish poverty-environment mainstreaming as standard practice in government and administrative procedures, systems, and tools 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 UN agencies) operating in the country. Starting from the pro-poor environment outcomes to achieve, 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. 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 Environment Outcomes



Government and Non-Governmental Actors

The mainstreaming effort will entail the cooperation of many government actors, each of which raises significant challenges and opportunities throughout the process (see 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 links 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 (see table 3.2).

Development Community

Harmonisation, Alignment, and Coordination

In accord with the Accra Agenda for Action (2008), the Paris Declaration on Aid Effectiveness (2005), and the Rome Declaration on Harmonisation (2003), development actors are striving for increased harmonisation, alignment, and coordination of their support to the governments of developing countries. 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 harmonisation, 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 increased commensurate with that of 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 sector-wide approach.

A poverty-environment mainstreaming effort also benefits from the technical expertise of donors, international non-governmental organisations (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, vice-president's office, cabinet	• Have many priorities to deal with • May face conflicting interests	• Turn these actors into champions • Have them take a leading role in the mainstreaming effort
Political parties	• Lack direct involvement in development planning • May have limited awareness of environment-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 environment-related issues • May face conflicting interests	• Leverage its legislative role • Foster its advocacy role, especially for budgeting • Cooperate with (or help create) parliamentary committees working on poverty-environment issues (e.g., access to land and natural resources)
Judicial system	• May have limited awareness of environment-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	• Links with environmental institutions may be weak • Environment may not be seen as a priority 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 and human capacities may be weak • May be focused on projects as opposed to development planning • May have difficulty in offering leadership on mainstreaming • 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 sub-national bodies	• May have weak capacities in regard to the environment • The lack of funding of sub-national bodies can lead to over-harvesting of natural resources • Environmental units are usually not well connected to development planning	• Support them in fulfilling their roles in development planning • Make use of the fact that some of these bodies deal directly with environmental assets (e.g., fisheries, forestry) • Encourage them to integrate poverty-environment linkages into their plans and budgets
Statistics office	• Data collection and management are often weak • Poverty-environment data are not generally captured by regular surveys • Capacity to produce policy-relevant information may be weak	• Develop poverty-environment indicators and integrate them in the national monitoring system • Build capacity to collect, manage, and analyse data on poverty-environment linkages

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

Actor	Challenges	Opportunities
Civil society organisations	• Capacities may be weak, especially with respect to engagement in national development planning processes • Often not involved in all stages of national development planning processes	• Make use of their expertise, including in addressing gender and women's 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 development of country-specific evidence • Promote inter-disciplinary 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 huge 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 fishermen	• Ability to make their voices heard may be weak or nonexistent • 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 grassroots 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 harmonisation among the UN agencies is important both for increasing effectiveness and for gaining political support for UN agencies' in-country work. When one or more UN agencies are supporting a poverty-environment mainstreaming initiative, the programme should be embedded into the UN Development Assistance Framework, the One UN Programme (where applicable), and the work programmes of participating agencies (UNDG 2007).

As a lead UN 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 UN agencies active in the country are also potential partners through their technical expertise and their existing programmes and networks..

3.3 Experience from UNDP and UNEP

As noted in chapter 1, this handbook is based primarily on the experience UNDP and UNEP have gained in helping governments mainstream poverty-environment linkages at the country level, in particular through the UNDP-UNEP Poverty-Environment Initiative.

The PEI is a global programme that supports country-led efforts to mainstream poverty-environment linkages into national development planning through financial and technical assistance for policymaking, budgeting, and implementation. At the time of publication, the PEI was working in Bhutan, Burkina Faso, Kenya, Malawi, Mali, Mauritania, Mozambique, Rwanda, Tanzania, Uganda, and Viet Nam. In these countries, the PEI collaborates with other UN initiatives—focusing on the MDGs, climate change, or other environmental issues—each of which brings its own expertise to the broader poverty-environment mainstreaming effort.

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

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

UNDP Millennium Development Goals Support Initiative. The MDG Support Initiative is designed to quickly mobilise technical support from across UNDP and the UN 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 UN 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, UN 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 Macedonia, Uganda, and Zambia.

UNEP's Sustainable Consumption and Production Programme. The programme focuses on promoting sustainable consumption and production (SCP) amongst 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.

UN Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries. This programme is a collaboration among the Food and Agriculture Organization, UNDP, and UNEP aimed at managing forests in a sustainable manner so that 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. 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 the country's governmental, institutional, and political contexts (section 4.2)
- Reviews the question of 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 to focus on 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 state of the environment and the socio-economic situation in a country. The objective is to develop an understanding of the nature of poverty-environment linkages in the country and their importance for human well-being and pro-poor economic growth. Another aim is to define pro-poor environmental outcomes to focus the poverty-environment mainstreaming effort on and to develop arguments to start making the case for such an initiative. Through this assessment, actors engaged in a poverty-environment mainstreaming exercise begin to refine—from the perspective of their own sector, sub-national organisation—their understanding 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. Thus, the approach includes collecting information from existing sources and mobilising local expertise. Among the elements to consider are the following:

- **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 socio-economic status, including data disaggregated by socio-economic group (age, sex, geographical location, etc.).
- **Poverty-environment linkages.** Identify the linkages between poverty and the environment (e.g., main ecosystem services, food security, fresh water, vulnerability to effects of climate change, deforestation, livelihoods of men and women), focusing on national development priorities.
- **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, causality, and stakeholder analysis to define possible pro-poor environmental outcomes that can guide the poverty-environment mainstreaming

Examples: Importance of Using 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 eco-tourism 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.

effort. Link the pro-poor environmental outcomes to national priority development issues and existing efforts in the field of poverty-environment in the country. The pro-poor environmental outcomes here identified 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 as well as the economy in general. Estimate the costs incurred due to poor environmental management and resulting environmental degradation. Estimate the benefits-to-costs 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, non-governmental actors, and local communities (see box 4.1). Practitioners can also commission additional work (e.g., problem and causality analysis) or studies targeted at potential areas of economic contribution to make the case for a national poverty-environment mainstreaming effort.

Box 4.1 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 after stoppage of sand mining in the area by the district environment officer. I can now grow some crops although I have lost all the fertile soils. —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 Kenyan shillings or so. Our daily expenses are over 100 Kenyan 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: Key Questions and Examples

A number of guiding questions can help governments assess and understand poverty-environment linkages (see box 4.2).

Box 4.2 Guiding Questions to Assess Poverty-Environment Linkages

Livelihoods and Health

- What is the size of the **population depending for their livelihoods on natural resource sectors** (e.g., forestry, fisheries, and tourism) and other productive sectors relying on the environment (e.g., water abstraction for hydroelectricity generation or irrigation, fertile soil for agricultural production)? What is the level of dependence of the poor on ecosystem services (both in formal and informal markets) such as timber, wildlife products, fisheries, agriculture, charcoal, and tourism? How much employment or income-earning opportunities do natural resources and other productive sectors relying on the environment 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 actions?

Environmental Risks and Climate Change

- 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?
- Are the **country's growth targets vulnerable to environmental risks** such as flooding, drought, and climate change? What are the effects and costs of environmental hazards (such as flooding or pollution) in terms of health, livelihoods, and vulnerability?

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**? For instance, this could include 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 through food security, access to fuel wood, shelter, and clean water) within the country?
- How do the various **socio-economic groups** (e.g., men and women, different age groups, different income-level groups) benefit from or are affected by these different questions and poverty-environment linkages (e.g., health, resilience, livelihoods, income opportunities, employment)?

Source: Adapted from DFID 2004a.

At this stage of the poverty-environment mainstreaming process, interested parties can rely on existing information, statistics, and studies, developed in the country or by development actors abroad (see box 4.3).

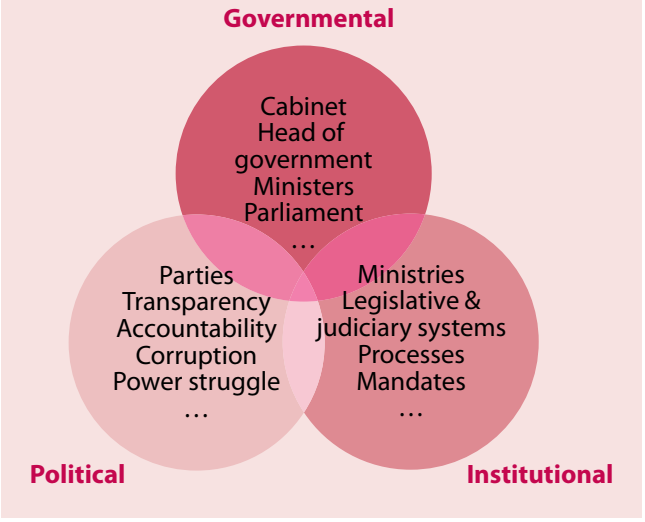
Box 4.3 The Importance of Ecosystem Services for Human Well-Being and Pro-Poor Economic Growth: Examples from Selected Countries

- **Cameroon.** Located in a dry area of erratic rainfall, the Waza Logone floodplain is a highly productive ecosystem and a critical area for biodiversity. Some 130,000 people rely on the floodplain and its wetland resources for their basic income and subsistence. However, the floodplain 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 floodplain have been carried out, and—based on the results—experts estimate that full restoration of natural inundation patterns would yield incremental economic benefits ranging from USD 1.1 million to USD 2.3 million per year. This translates into USD 50 of added economic value per annum for each member of the local population dependent on the floodplain for their livelihoods (Emerton, Bishop, and Thomas 2006).
- **Kenya.** The Aberdare mountain range of central Kenya provides a wide range of ecosystem goods and services that are 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 out 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 percent of the nation's tea production and 70 percent 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 Aberdares. More than 350,000 people visit the Aberdares National Park and Forest Reserve annually, generating some Ksh 3.8 billion in revenue (UNDP-UNEP PEI Kenya 2008).
- **Nepal.** About one-third of the world's population lives in countries with moderate to high water stress, with disproportionately high impacts on the poor. With current projected human population growth, industrial development, and the 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 USD 13 per drip irrigation kit, farmers can expect improvements in yield of 20 to 70 percent 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 generates incremental gains worth USD 570 (SIWI 2005).

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

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

Figure 4.1 Intersection of 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 a 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 so forth that affect the poverty-environment mainstreaming effort.

- **Planning processes.** Understanding the planning processes that shape a country's development and environmental priorities is a key step in the assessment. Relevant processes might include strategies (PRSPs, National Development Plans, National Sustainable Development Strategies, MDG strategies, sector strategies, etc.), action plans (National Environmental Action Plans, National Adaptation Programmes of Action, etc.), and budget processes (Medium-Term Expenditure Framework, Public Expenditure Review, etc.).
- **Institutions and actors.** Also contributing to the assessment is identifying the various institutions and actors from 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 agencies 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 as well as 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 to 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, as well as changes in mandates or roles, possible competition among agencies or ministries, and other governance factors.

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 the next steps of poverty-environment mainstreaming.

Example: Attention to Environmental Governance in Tanzania

Like many other developing countries rich in natural resources, Tanzania has faced environmental governance issues in regulating access to and use of these resources. For instance, a recent report estimated that only 4 to 15 percent of public revenues due from logging operations in selected districts of southern Tanzania were actually being collected (Milledge, Gelvas, and Ahrends 2007). This report, together with newspaper headlines on illegal logging, has galvanised 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. Through attention to these problem areas of environmental governance, Tanzania has better mainstreamed poverty-environment linkages in its poverty reduction strategy as well as general budget support, for which sector-specific targets have been developed.

Source: Assey et al. 2007.

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 links in national development planning. Table 4.1 presents examples of possible entry points.

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

Level of national planning	Possible 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
Sub-national authorities	Decentralisation policies
	District plans
	Preparation of sub-national budgets

The assessment also helps identify and engage 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, sub-national bodies, and parliament
- Non-governmental actors, including the media and women's groups
- Development actors
- Key individuals, including ministers and permanent secretaries

The Tanzania experience described in box 4.4 illustrates how including government actors and civil society, as well as 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 timeframe, 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 The Importance of Stakeholder Involvement: Tanzania's National Strategy for Growth and Reduction of Poverty

The National Strategy for Growth and Reduction of Poverty, known by its Kiswahili acronym MKUKUTA, provides the national development framework for Tanzania. The key entry point for mainstreaming poverty-environment linkages in the MKUKUTA was provided by the 2004 Public Expenditure Review, which highlighted the economic value of the environment.

Championing Poverty-Environment Mainstreaming

In 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 of Tanzania and subsequent political discussions.

- **The media** drew attention to the potential environmental impacts of key projects, stressing the implications for people's livelihoods and encouraging increased public involvement. As the media upped the extent and quality of its coverage of poverty-environment linkages, environmental concern began to permeate to the grassroots. 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 were 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 organisations** have focused on the environment and its links to people's livelihoods, while the more established environmental non-governmental organisations, which in the past 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

- 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 the 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.

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 sub-national planning processes?

Institutions and Actors

- Which **government institutions** are leading the national and sector planning processes? How is their work organised?
- How effective are the existing **mechanisms** (e.g., working groups, consultations, development assistance coordination 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 are the mechanisms through which other government institutions **participate**? What about non-governmental actors? Is there a need to help mobilise other actors?
- 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 which are available on the Internet:

- **World Bank Country Environmental Analyses** are an upstream analytic tool that include 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 as well as partnerships for poverty-environment mainstreaming.

Approach

The approach 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 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 that, '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

The findings should be disseminated broadly within the government, including to the head of state's office; environment, finance, and planning bodies; sector and sub-national bodies; political parties and parliament; statistics office; and the 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 organise field visits illustrating the importance of poverty-environment links. Exchange programmes with neighbouring countries that have experience with successful poverty-environment mainstreaming can also be a useful approach.

Involving the Media

The involvement of the media often deserves special attention and 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 grassroots level. Gender should be considered in order to better develop the messages delivered and 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 (see 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 enabled campaign organisers to 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 that 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 optimise their seed and fertiliser use.

Source: UNEP 2005.

Following this initial involvement of the media, their engagement needs to be maintained throughout the mainstreaming effort (e.g., 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 non-governmental organisations. Partnerships with development actors are important for their substantive contributions as well as for generating joint initiatives and leveraging in-country funding for poverty-environment mainstreaming.

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 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 stabilising the banks of the river, soil erosion was significantly reduced. On seeing the results, the PEI project coordinator in the environment ministry noted that, '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 that 'The initiative awoke awareness amongst villagers on environmental protection and a better perception on how environmental degradation can affect income generation'.

Source: UNDP-UNEP PEI 2008a.

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 their particular interests 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.

Further Guidance: Sources and Examples

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. One good example is the *Poverty and Environment East Africa Newsletter* (UNDP-UNEP PEI Africa 2007).

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 communications 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

Evaluating institutional and capacity needs is an important step in designing a poverty-environment mainstreaming initiative that is rooted in national and local institutional capabilities. This activity focuses attention on existing capabilities and their associated strengths and weaknesses in relation to poverty-environment mainstreaming. The objective is to integrate institutional and capacity needs in the mainstreaming initiative and ensure effective involvement of all development actors. The needs assessment should consider both the challenges at hand and those to come in later stages of the mainstreaming effort.

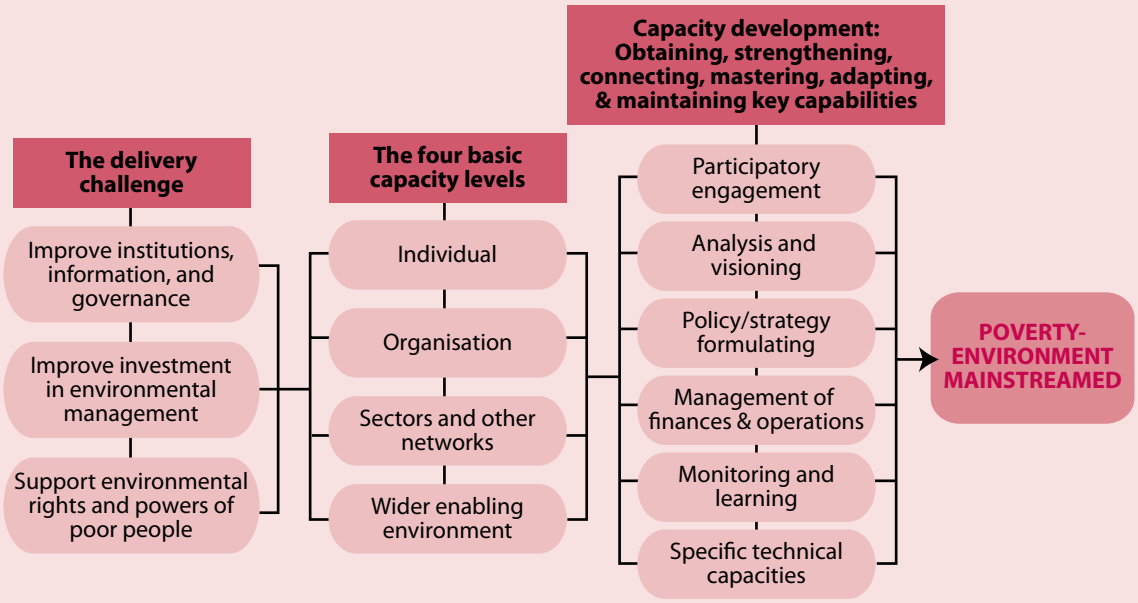
Approach

The needs assessment focuses first on identifying the level of understanding of 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 organisations—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 (see figure 4.2, which depicts the four basic capacity levels for poverty-environment mainstreaming).

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 UN. Based on this initial review, additional targeted assessments may be carried out as needed, with special attention to the environment, finance, and planning agencies. 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 organisations specialized in this area of work.

Figure 4.2 Delivery Challenge, Capacity Levels, and Capacity Development Key Elements



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 institutional-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 and two of its implementing agencies, 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 OECD Task Team on Governance and Capacity Development for Natural Resources and Environmental Management is developing a new methodology for capacity assessments. The tool identifies several parameters for evaluating the capacity of governmental bodies to carry out core tasks of environmental management, including political, legal, and organisational 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 2003).

4.5 Setting up Working Mechanisms for Sustained Mainstreaming

In this activity, the objective is to enable the environmental institutions and the finance and planning ministries to engage effectively with each other as well as with key sector ministries, sub-national 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 the next steps of the effort.

Institutional Arrangements at Political and Technical Levels

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

In addition, the government can establish a **steering committee**—including high-level representatives from the environmental institutions, planning and finance ministries, sector ministries, gender ministry, sub-national 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. However, 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 characterise current practice in poverty-environment mainstreaming.

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

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 national SCP Programme. Their inclusion has resulted in the journalists publishing regularly on the subject, thus contributing to raising the profile of issue in the country. The press has also been extensively engaged in the promotion of pilot activities.

Argentina. The country embarked on a process for the development of a Sustainable Consumption and Production plan, which was to form the basis for the mainstreaming of this issue. Initially, three working groups were established to contribute to identifying the priority areas, from government, industry, and NGOs and academia. From these working groups an advisory committee was established, to guide the development and implementation of SCP within the country. Later on the advisory committee was institutionalized by a resolution signed by the Ministry of the Environment and Argentina has established a SCP division under the Ministry of the Environment.

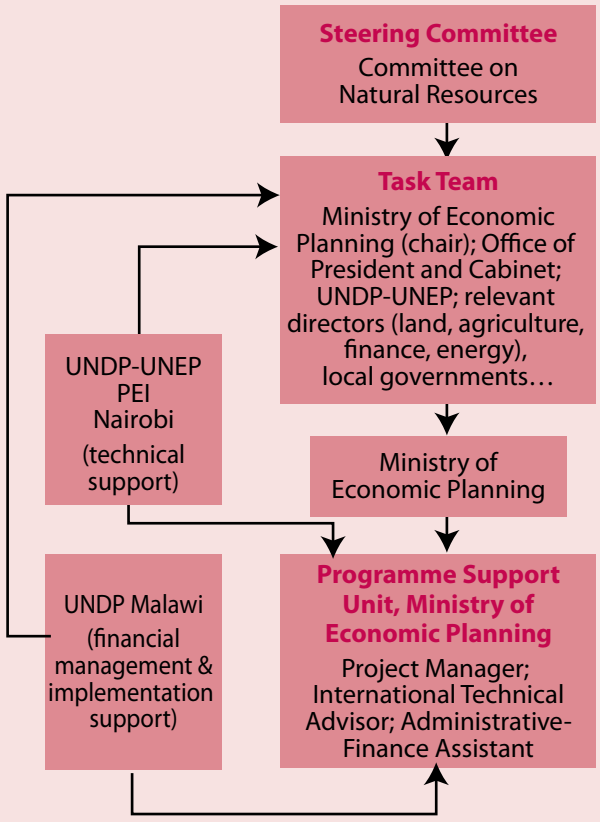
At the technical level, the government can establish a **technical committee or task team** responsible for carrying out the activities and tasks involved in a poverty-environment mainstreaming effort. The operational modalities (frequency of meetings, terms of reference, composition, incentives for participation, etc.) 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, liaison with the drafting team of a national development policy or strategy, and so forth.

Management Framework

The government, in close collaboration with development actors, designs 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, such as a work plan, 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 advisor (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 as well as 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 chapter 6.4).

Work Plan

The lead governmental institution(s) jointly review and discuss key findings of the assessments and activities carried out earlier on and their implications for a national poverty-environment mainstreaming effort. They agree on pro-poor environmental outcomes and entry points, outputs, activities, responsibilities, timetable and budget for the

remaining of the effort. The work plan should take stock of existing effort in the field of poverty-environment mainstreaming in the country, possible partners and reflect priority environmental and development issues, including poverty reduction, income generation, and sustainable growth.

Further Guidance: Key Questions

The institutional and management arrangements establish 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 thus help frame these arrangements. In addition, the government institutions taking the lead in the poverty-environment mainstreaming effort should ask themselves the questions listed in box 4.6.

Box 4.6 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 the 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 committees?
- Is there a need to help **mobilise 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 organised 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 mobilisation, work plan, monitoring and evaluation)?

Work Plan

- What are the **pro-poor environmental outcomes**, environmental and development issues to focus on?
- What are the **entry points, outputs, and activities**? Who is responsible for each activity? What is the **timeframe**?
- 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, e.g., 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, e.g., 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 to carry 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	• Work plan • 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 develop 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 the related policy measures (section 5.4)
- Summarises elements related to institutional and capacity strengthening (section 5.5)

Key Messages

- Use country-specific evidence to identify priorities and develop the arguments to engage effectively in the policy process.
- Align with the targeted process and use institutional measures such as sector working groups, stakeholder engagement, and donor coordination.
- Make sure the resulting policy document includes goals and targets based on poverty-environment linkages and implementation strategies in support of those targets.
- Develop and cost policy measures deriving from policy documents in order to influence the budgeting process.
- Strengthen institutions and capacities through tactical capacity building and on-the-job learning throughout the effort.

5.1 Developing Country-Specific Evidence through Integrated Ecosystem Assessments

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 IEA 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 IEAs are useful.

Box 5.1 Why the Need for IEAs?

IEAs are useful for several reasons:

- Identify **priorities** for action and analyse **tradeoffs**, showing how gains in some services may be achieved at the expense of losses in others
- Gain 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 IEA is based on the MA's generic methodology for conducting multi-scale 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.** Response options consist of carrying out an evaluation of past and current actions in order to provide 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 MA framework and in-country experience should shape the design of IEAs.

- **People first.** While the MA recognises that ecosystems have intrinsic value, it focuses on maximising human well-being now and over time. The MA is concerned with the distributional impacts for different groups of people (e.g., of different ages, genders, and geographical locations) 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 2008a.

- **Integrated.** An IEA 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.
- **Multi-disciplinary.** An IEA is best carried out by an interdisciplinary team of experts from various fields, including environmental experts, sociologists, gender experts, economists, and political scientists. These professionals may have different views and understanding of the interactions between ecosystems and human well-being, thus strengthening the overall assessment and its results.
- **Participatory.** An IEA 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. Thus, the utility of an assessment should be 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 place and the context (e.g., indigenous people, marginalised communities, women).
- **Multi-scale.** 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 (watershed, wilderness, migratory route, etc.). 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 (see box 5.3) can usefully inform the assessment.

Box 5.3 Climate Change Modeling

Some of the major climate scenario models are the Global Climate Model, the Statistical Down-Scaling Model, the PRECIS Regional Climate Modelling System, and the Model for the Assessment of Greenhouse-Gas Induced Climate Change/A Regional Climate Scenario Generators.

The development community has been working for a long time on climate change projections and scenario building, including strengthening institutions and capacities. For instance, the UK Meteorological office has been conducting targeted trainings on climate change modelling for developing countries. Strengthening institutions and capacities for climate change modelling can prove interesting in respect to an IEA exercise and more broadly for a poverty-environment mainstreaming effort.

- **Policy-relevant area.** 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 IEA, the area chosen for assessment should be one for which significant information and data are already available. As such, the main role of an IEA is to synthesise existing information by combining different sources of formal, informal, qualitative, and quantitative data. Finally, budget constraints can also limit the area of assessment.
- **Timely.** Because the IEA will provide country-specific evidence that can be used for advocacy, awareness raising, and convincing policymakers of the importance of sustainable environmental management, the assessment should precede the policy process the mainstreaming effort is attempting to influence (see section 5.3). However, the information generated through an IEA can be used at any time to influence ongoing or planned planning processes (e.g., policy process, budget process, or sub-national planning process).

Further Guidance: Sources and Examples

An IEA synthesises existing information. A logical starting point is the existing literature, including peer-reviewed, scientific, and semi-scientific. Databases held by government departments or research institutes such as the World Agroforestry Center (ICRAF) and the Consultative Group on International Agricultural Research (CGIAR) are a repository for much unpublished information. Given the many information gaps regarding ecosystem services and links to human well-being, it is often necessary to collect some new field data, make use of models, and tap local knowledge. Gender analysis frameworks can be useful both in collecting new data and analysing existing ones.

For more guidance, the reader can refer to the following:

- *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)
- *The Millennium Ecosystem Assessment* (2005)
- *Ecosystem Services: A Guide for Decision Makers* (WRI 2008a)
- *The UNEP-WCMC Millennium Assessment Manual* (forthcoming, late 2008).

Box 5.4 Assessment of the Northern Range, Trinidad and Tobago

Background. The Northern Range is a complex ecosystem covering approximately 25 percent of the land area of the island of Trinidad in the southeastern Caribbean. Its watershed areas are the most significant contributors to the freshwater supply for the island, and help to control flooding in the low-lying regions at the foothills of the Range. 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 for some Northern Range communities; affords safe harbours; contributes to local climate regulation; and also provides other economic activities through timber harvesting, wildlife hunting and the manufacture of goods from non-timber forest products.

Drivers of change. There are multiple drivers of ecosystem change in the Northern Range, which include urbanisation, 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 runoff regulation services. Unregulated mining, agriculture, and forestry have all contributed to the declining state of the Range. Other threats to the ecological integrity of the forests are forest fires, increased unsustainable land use for recreational and education purposes, and poor zoning and policy. On the island as a whole, freshwater resources are threatened as a result of deforestation and pollution. Faulty water distribution infrastructure is responsible for losses of between 50-60% of water supply before it reaches consumers.

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

Response options. Projections indicate that further conversion, degradation and decline in ecosystem services will continue unless appropriate policy measures are implemented to check the driving forces of ecosystem change. Therefore, 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
- Multi-lateral, multi-stakeholder decision-making processes
- Monitoring, evaluation, and academic research encouraged in the region

Source: Northern Range Assessment 2005.

5.2 Developing Country-Specific Evidence through Economic Analysis

The purpose of this activity is to demonstrate 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 amongst 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 income and wealth 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 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 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/morbidity data on health impacts. Once these relationships are demonstrated, they can help justify decisions about integrating poverty-environment linkages in policymaking 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

Examples: The Environment and GDP

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

GDP can be accomplished using informal data on 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 to make the case for sustainable natural resource management in certain countries—in the Middle East and North Africa (Sarraf 2004), Ghana (World Bank 2007a), and Nigeria (DFID 2004b).

- **Macro-economic indicators of production.** The contribution of the environment to the national economy can also be expressed through macro-economic 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, and/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.
- **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 unrealised due to poor market incentives, inadequate subsidies for natural resource extraction (such as, for example, low-cost loans for Indonesia's timber industry), artificially low taxes on natural resource use, lack of enforcement (for example, tax evasion on legal or illegal harvests), and/ 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.

Examples: The Environment and Employment

- Some 23 percent 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, from working in related jobs such as selling fish, exporting, and marketing (ADB 2001).
- In **India**, replacing traditional cook stoves with advanced biomass cooking technologies in 9 million households could create 150,000 jobs (excluding 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).
- 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 **Brazil**, the most recent agricultural census showed that one rural job is created for every 8 hectares cultivated by small farmers, whereas large-scale mechanised 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).

- **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 (see 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.
- **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

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 USD 84 million annually (SIWI 2005). The control programme and resulting decline in environmental damage from water hyacinths is credited with a yearly increase in income of more than USD 30 million. With programme costs of just over USD 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).

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 USD 1 million to USD 1.75 million per year, with annual costs of maintaining the wetland's capacity to provide these services of only USD 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).

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 USD 8 million per year, or about USD 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 percent); benefits to agricultural production and downstream fisheries (7 percent); and benefits from firewood, fishing, leisure, recreation, domestic sewage treatment, and freshwater supplies (4 percent). More than 30,000 people—mostly poor slum dwellers and fishing households—benefit from these services (Emerton and Bos 2004).

Madagascar. Investment in a new management regime to address over-exploitation 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 an impressive 1.5 (Rojat, Rojaosafara, and Chaboud 2004).

Examples: Contribution of the Environment to Livelihoods

- In **India**, natural resources provide up to USD 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 percent 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 percent since pre-agricultural times (World Bank 2004; WRI 2001).

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.

- **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 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.

Examples: Environmental Risks

- Approximately 600,000 deaths occurred **worldwide** as a result of weather-related natural disasters in the 1990s. Some 95 percent 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.

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 percent 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 percent higher.

Professor Das estimated that the economic value of these protection services was about Rs 1.8 million (USD 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 Rs 360,000 (USD 8,600), while a hectare of land after mangroves are cleared sells at Rs 200,000 (USD 5,000) in the market. The cost of regenerating 1 hectare of mangrove forest is approximately Rs 4,500 (USD 110), whereas the cost of constructing a cyclone shelter in the state of Orissa is Rs 3.0 million (USD 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 also 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, valuation, cost-benefit, 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 importance of positive poverty-environment linkages often is under-appreciated, it is important not

to swing the other way and exaggerate their significance. The poverty-environment links are complex and there are rarely simple cause-and-effect relationships. 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 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.
- **Consider spatial presentation of the results.** Data disaggregated at sub-national level can be usefully presented as maps linking spatially 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 utilized, the results of poverty maps suggests 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 US$1.1 billion in capital spending over five years (Henninger and Snel 2002).

Example: Subsequent Impacts of Deforestation

Reduced availability of fuel wood 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.

Source: IUCN 2007.

Further Guidance: Key Steps

Within the context of a poverty-environment mainstreaming initiative, a step-by-step approach to economic analysis can be useful (see 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 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, and/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 multi-disciplinary teams to conduct studies. Ensure the involvement of various stakeholders (in terms of, gender, socio-economic status, location, etc.). • 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 organisations 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, etc.) 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 and present evidence at different stages. More sophisticated evidence of linkages can be presented at a later stage.

5.3 Influencing Policy Processes

The objective of this step is to ensure optimal integration of poverty-environment issues into an over-arching national or sector policy, with a view to creating opportunities to effectively influence implementation of the policy, for example through the budgeting process and policy measures at the sector and/or sub-national 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 sub-national 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, fuel wood, 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 is both process-oriented and analytical. It builds on previous steps, in particular the preliminary assessments (see sections 4.1 and 4.2) and the development 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 links in their work, it is necessary to understand the related steps and procedures and gain access to the people involved.

- **Understanding the policy context and process.** In addition to understanding the overall context and poverty-environment linkages (see sections 4.1 and 4.2), having a good grasp on the targeted policy process is also critical. This includes the timetable, the roadmap 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

Examples: Ways to Become Part of the Process

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

government actors (the agency leading the policy process as well as other participating sector and sub-national institutions) on how poverty-environment mainstreaming fits with the timetable and roadmap 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 the effort can take place.

- **Responsibility and ownership of the process.** The agency 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 agency can then make the necessary working arrangements and require the integration of poverty-environment links in the submissions of sector and sub-national institutions.
- **Championing poverty-environment mainstreaming.** Policy processes involve numerous actors and mechanisms, such as working groups and drafting groups. It is thus necessary to have several champions participating in these mechanisms and engaging with influential individuals. There is a need for both high-level political engagement and technical-level engagement to convince and support the various actors to effectively integrate poverty-environment links into their work. Building partnerships with governmental, non-governmental, and development actors can be instrumental in mobilising more champions and ensuring successful mainstreaming (see chapter 3).

Example: Turning Senior Officials into Champions of Poverty-Environment Mainstreaming in Kenya

Two special visits to the arid northern part of Kenya for 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 as well as their interest in dryland issues in general. The visits were organised by the Pastoralists Thematic Group in collaboration with the PRSP Secretariat.

Source: UNDP et al. 2008.

- **Coordination mechanisms.** Collaboration and coordination with actors concerned with other cross-cutting issues, such as gender or HIV/AIDS, is advisable in order to create synergies and avoid competition. In addition, specialised 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, or interventions in a consultative forum). 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.

Example: South-South Cooperation Benefits Working Mechanisms for Mainstreaming

South-South cooperation enriched the process for Tanzania's poverty reduction strategy (MKUKUTA). Its officials made a visit to Uganda to learn from the process of revising Uganda's Poverty Eradication Action Plan and the role of its Environment and Natural Resources Group. Tanzania built on this experience in establishing its own Environment Working Group.

Source: UNDP, UNEP, and GM 2008.

Applying Policy Analysis

The 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 customised for advocacy purposes or be used as contributions to the process. Further analytical work might be needed to show how integrating poverty-environment links 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.
  - **Consultation with experts.** In practice, the analytical work often takes the form of consultation with experts, including workshops of experts 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 for mainstreaming poverty-environment links in the policy process. Such consultations should build on earlier work and help in the preparation of the environment sector's submissions into the policy process.

  With time and willingness to embark upon an approach that may be longer and more complex, interested stakeholders can carry out a Strategic Environmental Assessment (SEA) or make use of the Integrated Policy for Sustainable Development (IPSD) framework.

  - **Strategic Environmental Assessment.** An SEA 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, an SEA can also be useful to systematically review a policy process or document to identify possible poverty-environment contributions and refine priorities accordingly (see box 5.7).

Box 5.7 Using SEA 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 an SEA as part of a poverty-environment mainstreaming effort for a revised Poverty Reduction Strategy. The SEA 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 SEA 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 SEA processes and guided on how to incorporate the environment in policy formulation.

Outcomes. Planning guidelines were revised to integrate poverty-environment links at the sector and district levels. Greater emphasis was placed on the use of the SEA to improve the processes by which policies are translated into budgets, programmes, and activities. The SEA 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 2006–09 Poverty Reduction Strategy was drafted with direct input from the SEA team.

Source: OECD 2006a.

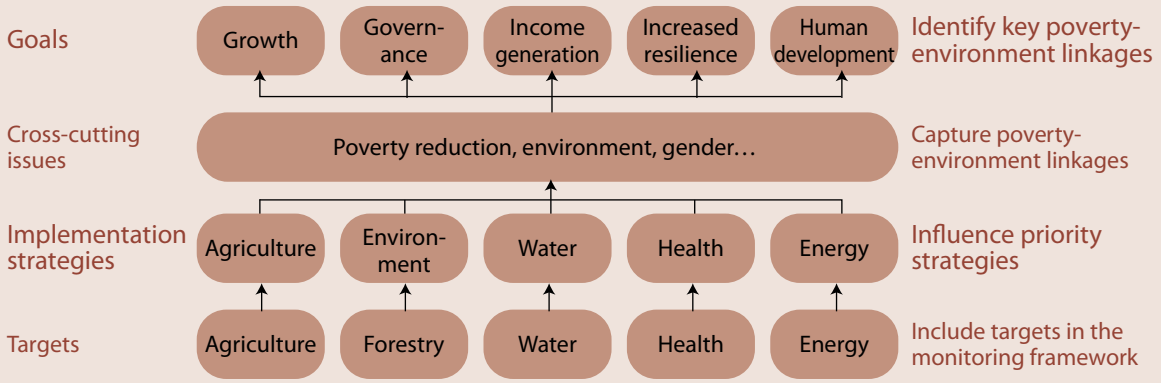
  - **Integrated Policy for Sustainable Development.** IPSD is a process that incorporates the main objectives of sustainable development/economic development, poverty reduction, and environmental protection into policy actions. IPSD goes beyond assessment and evaluation by extending to the whole process including agenda setting, policy formulation, decision-making, implementation, and evaluation (UNEP 2008a). When the context allows, relevant elements of IPSD 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 structure of the document can also include cross-cutting issues and present implementation strategies or targets.

  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 for 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.

Figure 5.1 Aligning the Analytical Approach with the Overall Policy Framework



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 document. 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 such that improved environmental management can be seen as both a cross-cutting issue and an identifiable goal in its own right.

Further Guidance: Key Steps and Examples

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

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 sub-national 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).

Table 5.2 Recommended Actions for Mainstreaming Poverty-Environment Linkages in the Policy Development Process

Step	Recommended actions for poverty-environment mainstreaming
1. Understand the policy context and process	• Develop a comprehensive understanding of the policy process (e.g., timeline, roadmap, steps in the process, actors and intended outputs). • Identify poverty-environment linkages in the overall context of the policy document.
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 recognising these links within the policy document. • Explore the possibility of a donor to provide funding specifically for poverty-environment linkages within the policy process.
3. Establish committees and contribute to the outline	• Identify key actors in the preparation of the basic outline of 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 processes. • Work with mainstreaming champions from key institutions. • Make necessary working arrangements with the lead institution so that poverty-environment linkages are well featured. Environment is often categorised as a cross-cutting issue and/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 publicise 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, etc.) 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 links 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 links at public consultations and review workshops to obtain buy-in from government bodies. • Make use of partnerships with non-governmental actors and publicity via 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 links.
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.

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

Background. In 2006, Rwanda launched the formulation of its second PRSP, the Economic Development and Poverty Reduction Strategy (EDPRS). Thanks to high political commitment the environment was identified as a cross-cutting issue for mainstreaming. However, capacity within the sector was very low, and a great deal of technical support was required 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, focusing on their links with the environment, and participating in the development of their logical frameworks and in the drafting of the EDPRS. The effort required continuous interaction with both sectors and policymakers. Often, champions had to cover several meetings simultaneously. It proved important to repeat the same messages in different settings, to prepare sector-specific tools and briefs for policymakers, and to hold many one-on-one meetings to bring the 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. Much of the data used were collected specifically for this exercise (see sections 5.1 and 5.2). Two pieces of information had particular impact: the estimate of the cost to the government of using diesel in generating electricity (USD 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 percent 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 trade liberalisation and removal of import duties related to renewable energy and energy efficiency, focus on high-end eco-tourism, and soil conservation measures 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 Advisor 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 of Government. 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 is 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: P. Driver, independent consultant, 2008.

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 sub-national 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.

The absence of prioritised 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.

Table 5.3 presents an overview classification of environmental policy instruments.

Table 5.3 Classification of Environmental Policy Instruments

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)	• Property rights • Tradable permits and rights • Offset programmes • Green procurement • Environmental investment funds • Seed funds and incentives • Payment for ecosystem services

Source: UNEP 2007a.

Approach

The approach 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 and/or a cross-cutting issue in the policy documents, 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 sub-national 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 sub-national 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; inter-cropping; more efficient use of fertiliser; more efficient irrigation, and rain water 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 predictions; 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 organisations 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 industrialised countries.

Second, even when such services are best provided by government (due to 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 5.4 and section 6.2).

Considering the many stakeholders, the approach clearly benefits from a participatory approach that can help link with the policy and budgeting processes, or with partner or 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., decentralisation, removal of perverse subsidies), most of the financial costs are transitional and operational costs. These may encompass

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, timeframe, and geographical coverage.
3. Cost measures	• Cost each measure based on the attributes defined in the previous step. For example, the timeframe 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. Prioritise measures	• Take into consideration pro-poor environment interventions, 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 monitoring plan for the budgeting and implementation process.

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 costs to cover government salaries and other recurrent costs (e.g., transport and monitoring). Budgets for training and capacity activities may also be important.
- **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 payoffs, 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 4:1 to 14:1; this makes them extremely attractive from a social investment standpoint (PEP 2005; Hutton and Haller 2004).

Further Guidance: Key Steps and Example

Measures need to be identified, developed, prioritised, 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 UN Millennium Project has developed a set of presentations and costing tools to support the MDG needs assessment methodology. 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.

Box 5.10 Step-by-Step 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, timeframe, and geographical coverage. For each measure, quantitative coverage targets will help to ensure that they 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 addressing questions such 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 such questions enables estimation of total financial resource needs and their distribution over time. For example, if developing quality standards and building capacity to enforce them necessitates large start-up costs, then more resources (for the select 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 soc-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 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 processes 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 the opportunities that arise throughout the process.

In particular, 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 advisor (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 advisor on the team was proven to be very positive in Kenya, Rwanda, and Tanzania. The technical advisor contributes to institutional and capacity strengthening in a number of ways, including the following:

- 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 an issue in the short term, establishing a poverty-environment mainstreaming team is a necessary step for longer-term institutional and capacity strengthening. In general, it is recommended that different approaches be combined by exchange visits (see box 5.11) or preceded by a formal training (see 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 organisations and their equivalents in other countries) to improve quality, national content, and ownership as well as access to state-of-the-art expertise.

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

Box 5.11 Uganda Visit to PEI Rwanda

A PEI 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. The study visit was part of an endeavour to facilitate cooperation and sharing of experiences among the seven countries that are part of UNDP-UNEP PEI in Africa.

Rwanda has recently completed its second PRSP, the Economic Development and Poverty Reduction Strategy, into which poverty-environment links have been successfully mainstreamed. Uganda is beginning the process of reviewing its Poverty Eradication Action Plan, and can learn from the Rwandan experience.

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 links 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 links 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 to promoting environmentally sustainable practices, as evidenced by the successful enforcement of the ban on plastic bags.

Source: Republic of Uganda 2008.

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

Kenya. In Kenya, organisations 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 processes. Moreover, the strategic location of the ALRMP within the Office of the President of Kenya enabled the participants to obtain access to key policymaking organs within government.

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

Source: UNDP, UNEP, and GM 2008.

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 system-wide 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 standards 9000 and 14000) 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 amongst 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 IEA 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 inter-personal 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 IEA and economic analysis improves the content and hence the quality of such studies • Drawing on the experiences and knowledge of indigenous peoples, marginalised 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 between the collaborating organisations	• 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 inter-personal 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 IEA or climate change
Exchange visits	• May lack follow-up and guidance after completion	• Allow for South-South cooperation • Strengthen inter-personal 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

Further Guidance: Key Opportunities and Examples

A summary of the main opportunities for institutional and capacity strengthening through this stage of a mainstreaming effort is presented in table 5.6.

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

Step	Opportunities for institutional and capacity strengthening
1. Collect country-specific evidence through IEAs (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 IEA • 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, marginalised communities, women, and citizens • Foster an interdisciplinary team that brings together a range of experts including those in the environment, sociology, economics, gender, and political science • Share the results with relevant government commissions and independent entities on planning, government performance, etc.
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 on 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 IEAs 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 an SEA and IPSD
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 IEAs	• *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 2006)
High awareness and understanding of poverty-environment issues at various levels	• Tanzania's *Poverty and Environment* newsletter (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
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, Kenya and 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 engage in the budgeting process and access financing options (section 6.2)
- Proposes means to support policy measures' implementation (section 6.3))
- Discusses the establishment of mainstreaming as standard practice (section 6.4)

Key Messages

- Operationalise poverty-environment mainstreaming following through from influencing policymaking.
- Design indicators based on targets included in the 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 sub-national bodies to strengthen the implementation of the policy measures.
- Embed poverty-environment mainstreaming in government and administrative practices, procedures, and systems in support of future national development planning.

6.1 Including Poverty-Environment Issues in the National Monitoring System

The national monitoring system helps track progress made against the goals of policy documents and implementation of strategies and policy measures, and take corrective actions if 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 will be implemented in an effective manner.

- **Regular monitoring and reporting.** If poverty-environment issues are included in the national monitoring system, it is easier to track progress towards achieving the relevant goals, targets, and implementation strategies included in policy documents (e.g., PRSP or sector strategy). Including poverty-environment 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). In this respect, integrating poverty into regular reporting on the 'State of the Environment'—which may be requested by national law—can also be considered.
- **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 important in many countries.

Approach

The approach consists of monitoring poverty-environment issues within the framework of the existing monitoring 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, which should be in place to review the performance of the various national, sector, and sub-national implementation strategies, including poverty and MDG monitoring. Promoting linkages between policymaking and monitoring processes is highly critical to improving both of these aspects of national development planning.
- **Poverty-environment indicators.** Poverty-environment 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.
- **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 data collection and analysis. Responsibilities related to data collection and

Examples: Poverty-Environment Indicators

- Percentage of households and industries using fuel wood 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 eco-tourism 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., flood, droughts and climate-related events)

monitoring are defined at national, sector, and sub-national 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 institutions may collect relevant data on the state of the environment and emerging issues like climate change, for example through the meteorological institute. This distribution of responsibilities for monitoring poverty-environment issues highlights the importance of a strong coordination mechanism to avoid duplication of effort and to reinforce and complement existing systems, such as regular surveys and census activities.

It is thus important to strengthen existing capacities in the national statistics office, planning ministries, sector ministries, and other information-gathering agencies, including environmental institutions, civil society, and academic institutions. In doing so, improving coordination and sharing of information is often a priority.

Further Guidance: Key Steps and Example

Ensuring that poverty-environment issues are integrated into the national monitoring system requires a number of key steps, to 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 links in a national monitoring system. It highlights potential indicators that may already be covered in existing routine and periodic data collection systems.
- **Organise consultations.** Mainstreaming in the national monitoring system requires raising awareness and involving various government and non-governmental actors in the context of national efforts towards poverty reduction. Consultations should include both the producers and users of data at all levels to assess and create demand for data and analysis and promote networks that link policymakers to providers of information. Consultations are needed at various stages of the process.
- **Analyse national priorities.** It is critical to identify national priorities and poverty-environment goals, targets, and implementation strategies included in policy documents so the integration of poverty-environment issues into the national monitoring system is fully aligned and informs future policymaking and budget allocation (see sections 5.3 and 6.2).

- **Analyse the existing national monitoring system.** Poverty monitoring systems often ignore linkages with the environment while environment monitoring systems tend not to consider the poverty impacts of environmental changes. Assessing these monitoring systems and other data collection and data management systems provides essential information for mainstreaming. This entails analysing availability, quality, and relevance of existing datasets for poverty-environment monitoring (e.g., sex disaggregation); quality and relevance of existing poverty indicators and and environment indicators; roles and responsibilities; and potential providers of data for poverty-environment monitoring.
- **Identify and assess possible poverty-environment indicators.** The process of identifying possible indicators should use a participatory approach and build on previous steps (see chapter 5). As mentioned, the poverty-environment indicators should be fully aligned with policy documents such as the PRSP which 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 are possible at this stage. These should be narrowed down to a small number of strategic indicators that can realistically be monitored and will effectively inform future policy processes. The selection criteria in box 6.1 can help in narrowing down 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 quality and available. Refinement of existing data collection systems should be considered if needed.
- **Comparable and sensitive to changes.** Indicators should facilitate assessment between different circumstances and time-scales 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 Environment Agreements.
- **Gender-sensitive.** Indicators should be gender-sensitive and data able to be disaggregated by sex so that further analysis of data 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, water quantity, or habitat protection) 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).
- **Can be aggregated.** 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, and United Republic of Tanzania 2005a.

- **Integrate poverty-environment indicators in the national monitoring system.** There are various ways to integrate the proposed indicators at national, sector, and sub-national levels—for example, during periodic reviews of the national poverty or MDG monitoring system. The indicators can be also be integrated in ongoing census and surveys 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.
- **Strengthen institutions and capacities.** It is advisable to strengthen institutional and individual capacities to develop and use poverty-environment indicators, as well as to collect, analyse, and manage data (revision of periodic surveys, data storage, database management, and geographical information system). Working with the UN Statistics Division, research institutes, and universities can be a good start. Part of this effort also involves documenting each step of the process of integrating poverty-environment linkages into the national monitoring system.
- **Regularly disseminate results of the analysis.** Integrating poverty-environment linkages into the national monitoring system is an iterative process. The whole effort aims at informing policymakers and implementers about poverty-environment linkages, trends, and impacts of policy interventions 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 gather feedback.
- **Regularly review the monitoring system.** Gathering feedback from the users and producers of data will allow 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).

The experience in Rwanda presented in box 6.2 highlights a number of steps needed for mainstreaming.

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

Background. The environmental institutions coordinated the development of poverty-environment indicators and a strategy for monitoring them within the framework of Rwanda'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
- Categorising 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. However, the process does not stop there. Indicators are a tool to be continuously improved with practical lessons. They are meant to help deliver the 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.

6.2 Budgeting and Financing for Poverty-Environment Policy Measures

Many poverty-environment measures are under-funded 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 mobilising 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 under-addressed by the private sector due to market failures. Public financing thus remains central to poverty-environment mainstreaming.

From the public sector side, the main mechanism for public spending is the national, sector, and sub-national budgets. Financing sources include both tax and non-tax revenues, such as user charges and fees from permits or licences on natural resources and parking fees.

Approach

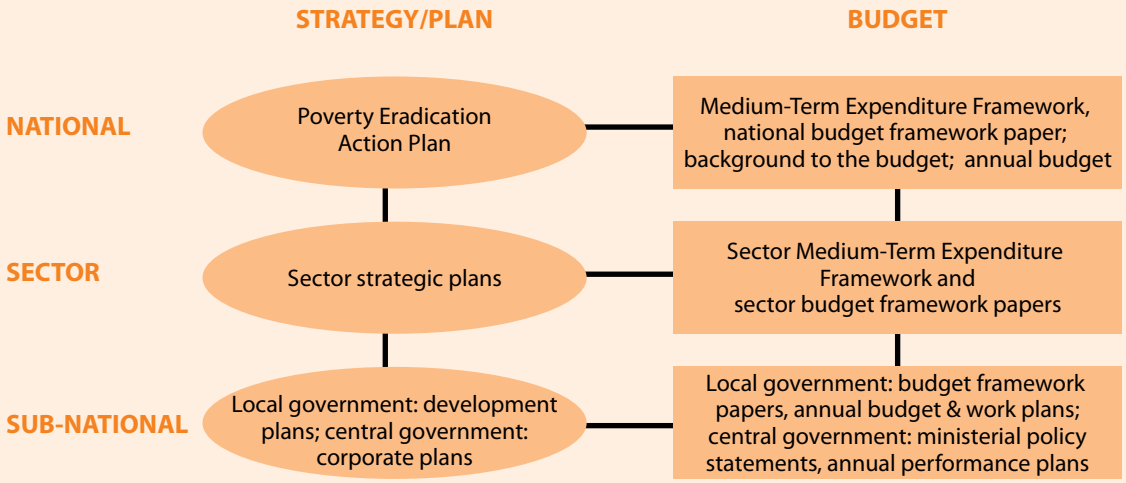
The approach consists of engaging in the budgeting process at various levels and of improving the contribution of the environment to public finances.

Engaging in the Budgeting Process

Engaging in the budgeting process requires understanding the process, coordinating with the related policy processes and working with civil society, donors, sector and sub-national bodies.

- **Understanding and becoming part of the process.** The budgeting process takes place at national, sector, and sub-national levels (see figure 6.1).

Figure 6.1 Planning and Budgeting Instruments in Uganda



Source: Wilhelm and Krause 2007.

As when working to influence policy measures (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.

This means that engagement in the budgeting process should follow the budgetary calendar and practice, and meet the standards of the ministry of finance or planning. It is important to engage through working mechanisms of the budgeting process such as advisory groups to the budget committees. In this regard, lessons from gender budgeting processes can be useful for poverty-environment budgeting efforts.

An important challenge is to understand how a country prepares its budget. In some countries, like Uganda, the process begins at the district or village level, which assists in capturing the pressing priorities. In others, such as Eritrea, the budget is decided upon at the cabinet level and funds distributed accordingly. In addition, ministries have their own budgets which contribute towards the overall budget. Depending on national circumstances, the budgeting process may include a Medium-Term Expenditure Framework (MTEF) over three or five years; environmental actors have important incentives to participate in the framework process as indicated in box 6.3.

Box 6.3 Incentives for Environmental Institutions to Participate in the MTEF 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 them
- 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

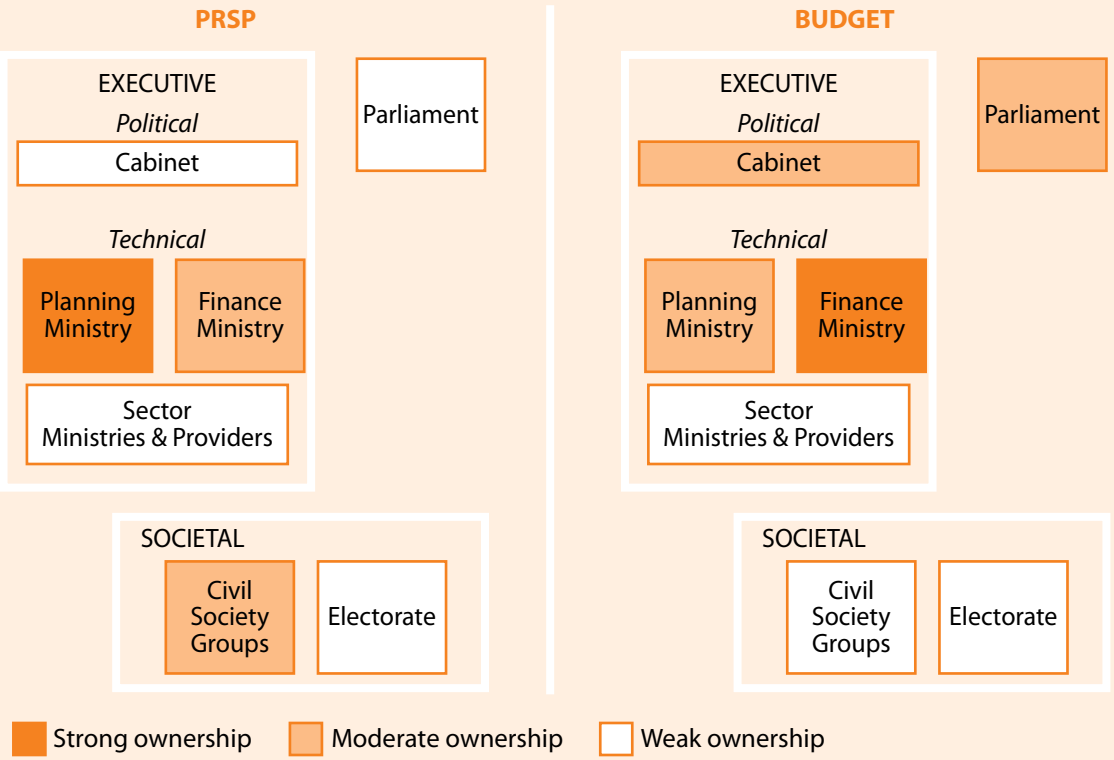
Source: Petkova and Bird 2008.

- **Coordinating with the related policy processes.** Budgeting and financing for poverty-environment mainstreaming aims at ensuring that the policy documents are implemented. Coordinating with the relevant policy processes is thus critical and complex.

  A multiplicity of institutions and actors preside over a variety of initiatives in the planning and budgeting process. Figure 6.2 conceptualises the 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 while the finance ministry and civil society have relatively less ownership. Conversely, the finance ministry has strong ownership of the budget process and the planning ministry plays a lesser role. The parliament also has moderate ownership of the budget process while civil society has a relatively weaker influence.

Figure 6.2 Asymmetries of Ownership in the PRSP and Budget Processes



Source: Wilhelm and Krause 2007.

Since the planning and finance ministries are separate institutional entities in a number of countries, 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).

Following poverty-environment mainstreaming at the policy level (see section 5.3), it is important to engage with the main players who drive the budget and to use their language.

Example: Budgeting for the Environment in Uganda

After the Ugandan National Environment Management Authority had worked hard to integrate the environment into the PRSP, it seized on an opportunity to include the environment into Uganda's national budget. A key deadline for finalising the government's 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 as well as the costs of inaction. The Budget Director was convinced and immediately accepted the idea of adding guidelines for the environment into the Budget Circular. Ever since, the Budget Director has been challenging environmental actors to give him 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.

Economic analyses targeting specific sectors or issues (see section 5.2) can help develop arguments and strengthen the case with the sector and sub-national bodies and the ministry of finance. In addition, development and costing of policy measures carried out earlier in the process provide useful elements for the budgeting exercise (see section 5.4).

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

Finally, 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, and funding for poverty-environment measures may be spread throughout the sectors and sub-national bodies. In such circumstances, it is even more critical to work closely with the different actors to make sure funding for poverty-environment interventions is not left out, for example through sector working groups or with sub-national bodies.

- **Mobilising civil society and the public.** Generally speaking, civil society has a relatively important presence in the PRSP process (e.g., through participatory appraisals) and a limited influence over the budget, with a potential for further involvement. While there is a growing body of work on gender budgeting often 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 are important and can 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

With a significant increase in natural disasters in Viet Nam in 2007, the government has decided to immediately develop a targeted investment programme focusing on climate adaptation.

- **Coordinating and working with donors.** In the medium term, many poverty-environment issues will still be donor financed. There is thus a need to increase donor support either specifically or through general budget support modalities, both for the environment ministry and for sector ministries, to integrate poverty-environment issues in their work.

  Budget support is increasingly used to disburse donor funds but is sometimes criticised for allowing environmental issues to be ignored. It is therefore key to move towards innovative approaches of joint donor poverty-environment funding, leveraging donor groups. Improving harmonisation

Example: Environment Included in Performance Assessment Framework in Tanzania

In Tanzania, where donors provide direct budget support of approximately USD 600 million per year, it was imperative to ensure this aid had an environmental sustainability component. The Government of Tanzania, 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 also focused government attention on its own environmental performance.

Source: Assey et al. 2007.

between the many external sources of global funds (e.g., through the GEF) with the national budget and other donor sources can also be beneficial.

Budget support will be provided in line with the priorities in the PRSP or equivalent policy document, hence the importance of mainstreaming poverty-environment in the policy documents. In addition, it is critical to work with government and donors to include poverty-environment indicators (see section 6.1) in the Budget Support Performance Assessment Framework to ensure that appropriate attention to poverty-environment issues is built into these key government-donor frameworks, as illustrated by the Tanzanian example.

- **Providing appropriate financing to sector and sub-national levels.** Sectors and sub-national bodies play a key role in environmental service provision and management. Attempts to promote poverty-environment measures have had mixed success partly because many sub-national bodies lack capacities and financial resources and may not be focused on poverty reduction. In particular, the lack of adequate funding of local authorities can drive them to maximise short-term harvests of natural resources in order to collect revenues to operate.

  The Namibian experience with protected areas shows that underfunded protected areas are more liable to end up being a drain on public funds than a source of economic benefit (see box 6.4).

Improving the Contribution of the Environment to Public Finances

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

- **Raising revenues through sustainable 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 whilst ensuring sustainable management of natural resources. In some cases, environmental institutions are empowered to collect their own taxes and charges which can be reinvested in improved management. In many protected areas, a share of the entrance fees will go 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 and 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.

  The way fiscal revenues are shared between different levels of government raises issues. Earmarking revenues from pollution or natural resource extraction taxes to the sectors or sub-national bodies which are collecting them can stimulate collection efforts, public support for the 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 marginalisation of environmental issues in the mainstream budget process (OECD 2007).

Box 6.4 Economic Analysis and Feasibility Study for Financing Namibia's Protected Areas

Background. Studies have highlighted tourism as being one of Namibia's most important industries, with much of the sector dependent on wildlife. Indeed, purchases of services by foreign tourists were estimated to be about NAD 3,100 in 2003, accounting for some 24 percent of the total value of exports of goods and services. Although the 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 which 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 the protected area system. This situation arose at least partly because of a failure to recognise the current and potential economic value of protected areas. Yet ironically, underfunded protected areas are more liable to end up being a drain on public funds than a source of economic benefit.

Approach. In order 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 protected area system over the next decades.

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

The study thus 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. In addition, 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.

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 (see boxes 6.4 and 6.5), or to convince decision-makers to invest in long-term poverty-environment policy measures.

- **Valuing the economic importance of natural resources.** Valuing the economic contribution of natural resources and their replacement costs when depleted can inform policymaking, budgeting, and financing for poverty-environment issues. It can help increase revenue collection, limit the depletion of resources, and inform poverty-environment policy measures. This requires strengthening the capacities of environment, planning, finance, and sector and sub-national bodies to track and forecast this contribution and how it can be improved—for example, through Public Expenditure Review (PER), environmental accounting, or economic analyses (see section 5.2).

Box 6.5 Environmental Institutions Raising Revenues and Developing Evidence to Increase Their Budget Allocation

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. As a consequence, it has convinced the Treasury to allocate funds for an additional 1,000 staff members who can further protect the environment and increase revenues.

Cambodia. The Fisheries Department was able to show that it contributed 10 percent of GDP. This analysis was instrumental in persuading the Ministry of Finance to give more priority to fisheries so they received more government funds and higher priority in dialogue 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.

Sri Lanka. By managing its plantations more profitably, the Forestry Department was able to reduce its demand for public revenues considerably. By so showing that it could generate revenues, the department was able to convince the Treasury to provide it with a higher budget.

Tanzania. The Ministry of Finance increased the budget allocation to the environment by five times on the strength of evidence from a Public Expenditure Review that showed an annual loss of USD 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 2008).

Example: The Environment and Annual Public Expenditure Review in Tanzania

Under the Tanzania Poverty Reduction Strategy, each priority sector had to undertake an annual PER. However, key environmental values, expenditures, and revenues were not included in early PER submissions at either the national or sector level. Given the economic importance of natural resource management to Tanzania, the Ministry of Finance had expected to see a substantial increase in non-tax revenue collection. It therefore called for an inquiry on environment, energy, and land within the PER exercise. Through the environment PER, the potential for investing in environmental management for poverty reduction has become clearer to the Ministry of Finance. The official environment budget has now grown considerably, from just over Tsh 1 billion in 2005–06 to almost Tsh 5.7 billion in 2006–07.

Source: Assey et al. 2007.

- **Making use of market mechanisms.** Besides investing directly in poverty-environment issues, the government can create markets or influence existing ones so that the value of environmental issues is reflected in the marketplace. Payment for ecosystem services and carbon trading are two examples of such market mechanisms that can contribute to raising revenues and create incentives for sustainable environmental management and/or investments that would otherwise have necessitated public spending (e.g., renewable energy facilities). Besides providing sources of financing, some types of payments for ecosystem services—and environmental fiscal reform—can thus be considered as policy measures for poverty-environment mainstreaming (see sections 5.4 and 6.3), as they influence the way the environment is being managed.

- **Payment for ecosystem services.** Also known as payment for environmental services, this 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.
- **USA.** A portion of household water bills in New York is used by the water company to compensate farmers in the vicinity of the water company's intake 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).** The CDM under the Kyoto Protocol allows industrialised 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 industrialised countries finance investments in the fields of renewable energy (wind, hydropower, biomass energy, etc.), improved industrial processes and energy efficiency, improved waste management (landfill gas), or agriculture in a developing country.

  The CDM is entirely commercial in nature, involving contracts between polluting entities and those who 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. As a result, in 2006, over 90 percent of the CDM projects benefit only five middle-income countries and emerging economies (UNDP 2006).

- **Other opportunities for carbon trading.** While the CDM is the officially sanctioned carbon trading mechanism between industrialised 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.

- **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 through 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. Likewise, collective fishery management is increasing with major successes in Cambodia and

attempts made in Bangladesh. In respect to water and sanitation, latrines and basic water supply can be provided by poor people who organise themselves at low cost to provide them.

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 USD 15 billion per year (Brack 2006). Similarly, the value of illegal, unreported, and unregulated fishing in developing countries is estimated at USD 4.2 billion to 9.5 billion (MRAG 2005).

Indonesia. Research suggests East Kalimantan loses USD 100 million annually in lost tax revenue due to illegal logging (CIFOR 2006).

Cambodia. Bribes to government officials in the forestry and land departments in 1997 were estimated at USD 200 million per year, while official revenue from legal forest operations was only USD 15 million (WRI 2003).

Papua New Guinea and Pacific. In Asia, the countries most affected by tax evasion in fisheries are in the Pacific whose rich tuna fishery is fished by commercial fleets. In Papua New Guinea, the cost from illegal, unreported, and unregulated fishing is over USD 30 million per year (MRAG 2005).

Further Guidance: Key Steps

Table 6.1 provides step-by-step guidance to the budgeting process, which can help in conducting the effort.

Table 6.1 Main Entry Points in the Budget Process and Recommended Actions for Poverty-Environment Mainstreaming

Entry point	Recommended actions for poverty-environment mainstreaming
Budget execution report of previous financial year(s)	• Assess and review the existing level of spending and budget allocations for poverty-environment measures in the lead ministry, sectors, and sub-national bodies. • Integrate assessment of spending for poverty-environment into the PER or use the results of an independent Public Environmental Expenditure Review or other economic analyses to inform the overall PER. • 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 financing gap. • Organise working groups or consultative meetings to discuss and prepare sector and sub-national budget reports to work closely with sectors and sub-national actors on poverty-environment 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 environmental expenditures in these documents.
Preparation of sector and sub-national budgets	• Provide assistance in budgeting for poverty-environment issues, including assessing revenues from natural resources at each level. • Ensure that sub-national bodies benefit from adequate funding to avoid over-harvesting of natural resources at the local level.
Revision of the budgets submitted	• Sectors and sub-national 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 that the national and sub-national 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. The 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). Furthermore, 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 the parliament and the public. Encourage verification of budget execution, results, and the new budget allocations.
Budget execution and expenditure management	• Verify that public expenditures achieve the intended results and contribute to a coherent strategy for achieving poverty-environment objectives. • Once funds have been allocated, apply good practices in terms of environmental expenditure management.
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 that they can facilitate future reporting, decision-making, or corrective measures in the policy-making and budgeting processes.

6.3 Supporting Policy Measures at the National, Sector, and Sub-National 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 objective of supporting the policy measures is simply to ensure that the measures are implemented in an effective manner and that the budget allocated for poverty-environment is executed. A related objective is that policy measures are integrated and take place through related national, sector, and sub-national programmes and activities.

This activity also has the objective of ensuring lessons learned through monitoring and evaluation.

Approach

The approach consists of providing technical support and engaging with government and development actors at national, sector, and sub-national levels at various stages of implementation:

- **Planning of policy measures**, including defining an implementation plan, assigning roles, building partnerships, and assessing the policy measures. Box 6.6 illustrates the use of SEAs at the sector level to formulate and implement a sustainable tourism policy.

Box 6.6 SEA of Mexican Tourism

Background. Tourism accounts for approximately 9 percent of Mexico's GDP. It is the country's third largest source of foreign currency (USD 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 resource 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. The 2001–2006 National Development Plan emphasised the need for economic development with human and environmental quality.

Approach. An SEA 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, the Inter-sectoral Technical Working Group was established, comprising representatives from tourism, environment, forests, water, urban development, and the interior and finance ministries. It set sector priorities, an action plan for implementation, and medium-term monitoring indicators. This group has since been formalised as the Inter-sectoral Commission for Tourism.

Key benefits.

- The SEA provided environmental-based evidence to support informed decisions. It identified environmental opportunities and constraints associated with different growth scenarios, as well as priorities consistent with optimising the benefits from tourism without over-exploiting 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 management and environmental management).
- **Monitoring and evaluation of policy measures**, including financial follow-up and lesson learning. Box 6.7 illustrates the importance of evaluating policy measures in three cases of economic instruments in Uganda.
- **Scaling-up policy measures**, duplicating and broadening successful measures.

Box 6.7 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 5-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 Minister 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 aim is to help the poor, only 2.3 percent of the rural population use either electricity, liquid petroleum gas, or paraffin for cooking and so the subsidy's chances of helping the poor are low. In addition, the Uganda Revenue Authority has forfeited Ush 3.4 billion (USD 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 Ush 0 to 13 million in proportion with 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 Minister 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 percent of rural households borrow from formal sources and 4.5 percent from semi-formal sources. Given that small-scale subsistence farmers account for 70 percent of the poor, it is very 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. There is a case for transferring some of the tax break to microfinance institutions which more likely to lend to the rural poor. Finally, there is a need to monitor the tax breaks that banks claim for their expenditures and losses in the agriculture sector.

Source: UNDP-UNEP PEI Uganda 2008.

Further Guidance: Key Steps and Examples

A number of steps to be adapted to the particular context can help with the effort, as explained in table 6.2(OECD 2007; ODI 2004; Kojoo 2006). Depending on the circumstances, steps may be done concurrently or in a different order.

Box 6.8 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, as well as opportunities for replicating the effort.

Box 6.8 Support to District Environment Action Plans in Kenya: Integrating the Environment into Development Planning at the District Level

In Kenya, the poverty-environment mainstreaming effort included support to develop District Environment Action Plans in three UNDP/Ministry of Planning and National Development Millennium Districts: Bondo District (Nyanza Province), Murang'a North District (Central Province) and Meru South District (Eastern Province).

Approach. The District Environment Action Plans were developed in line with the District Development Plans 2009–2013. The development process included the following:

- Community-based planning, in collaboration with 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
- Finalisation of the 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 certain plans were more complete than others, the project produced a valuable learning experience and the project is being scaled-up to other districts.

Lessons learned.

- Linkages between the environment and planning were strengthened thanks to joint support from the respective institutions.
- 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.

Source: Wasao 2007.

Table 6.2 Main Steps in Implementing Policy Measures	
Step	**Recommended actions for poverty-environment mainstreaming**
1. Develop an implementation plan	• Design the measure in line with the national, sector, and poverty-environment priorities identified in the policy document at stake. • Assess the environmental component of the policy measure, for example through a SEA or another 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 setup and the decision-making process. • Assign clear roles and supervision assignments. • 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 or participatory workshops to ensure buy-in and broaden the circle of those who are impacted by it. • Utilise existing institutional structures (possibly improved or refined) for implementation and national human, financial and technical resources should be utilised for long-term sustainability. • Support programme, project, financial management and environmental management. • Use the measure to demonstrate the benefits for poverty reduction and the environment. In Kenya, field visits have helped show that increased agricultural yields can foster sustainable development for the benefit of the poor.
5. Monitor	• Monitor and collect feedback on how the implementation is progressing, including following up on expenditures. • Carry out a mid-term 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 sub-national governments to adhere to sector policies and guidelines, and improve service delivery. In Uganda districts assess sub-county performance and these assessments are verified by the central government.
6. Evaluate and collect lessons	• Evaluate and feed the lessons back to relevant processes including policy-making and budgeting. • Consider using external evaluators to raise issues that are not noticed from an inside perspective. • Share lessons learnt produced in a participatory manner with those who worked on developing and implementing the measure. Use lessons learnt to influence the way future interventions are carried out in the country or region. • Use audits to increase accountability.
7. Replicate the intervention	• Scale-up or replicate measures successful iin one area or sector by collaborating with other sector and sub-national bodies. For example, if the measure was a change to national level policy, advocating for reproducing the policy at the district or provincial levels can be an option.

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, as well as to foster an understanding among the people who work within these systems so that they can improve public performance and achieve poverty-environment objectives.

Approach

The approach involves drawing 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 approach first consists of 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 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 sub-national strategies or plans. Similarly, mainstreaming poverty-environment links in the reviews of the national budget allocation process (e.g., MTEF) is critical for long-term results in the area of poverty-environment mainstreaming.
- **Institutional cooperation mechanisms.** Mechanisms for long-term engagement among the environment, finance, planning, and sector and sub-national bodies should be put in place. These mechanisms can take the form of thematic working groups, stakeholder meetings, or making use of existing governmental committees or donor coordination mechanisms, amongst others. New structures can thus be created or existing

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.

mechanisms leveraged. The modalities of operation of such working mechanisms (frequency of meetings, terms of reference, composition, etc.) should also be defined.

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

Examples: Human Resources

- In 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

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

Examples: Tools

- Regular working papers or policy briefs
- Studies and department reports
- National audits and monitoring programmes
- Communication tools
- SEAs 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 organise trainings and provide tools for institutional capacity strengthening, and interested countries can make use of such instruments or cooperate with these partners in areas where it is needed. Box 6.9

provides examples from countries that have used national development processes as opportunities to strengthen their institutions and capacities.

Box 6.9 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 amongst the different groups. The experience may offer a model for replication in other fragile states or post-crisis situations.

Mozambique: Effective budget supports post-flood reconstruction. Following the floods and cyclones of 2000 and 2001, the government set a post-flood reconstruction programme, revealing its leadership and its ability to rally the international community and perform functions efficiently and transparently. Strong commitment provided the incentive for donors to pledge significant resources and work largely through the national system, including the budget. In turn, this 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 the legislators.

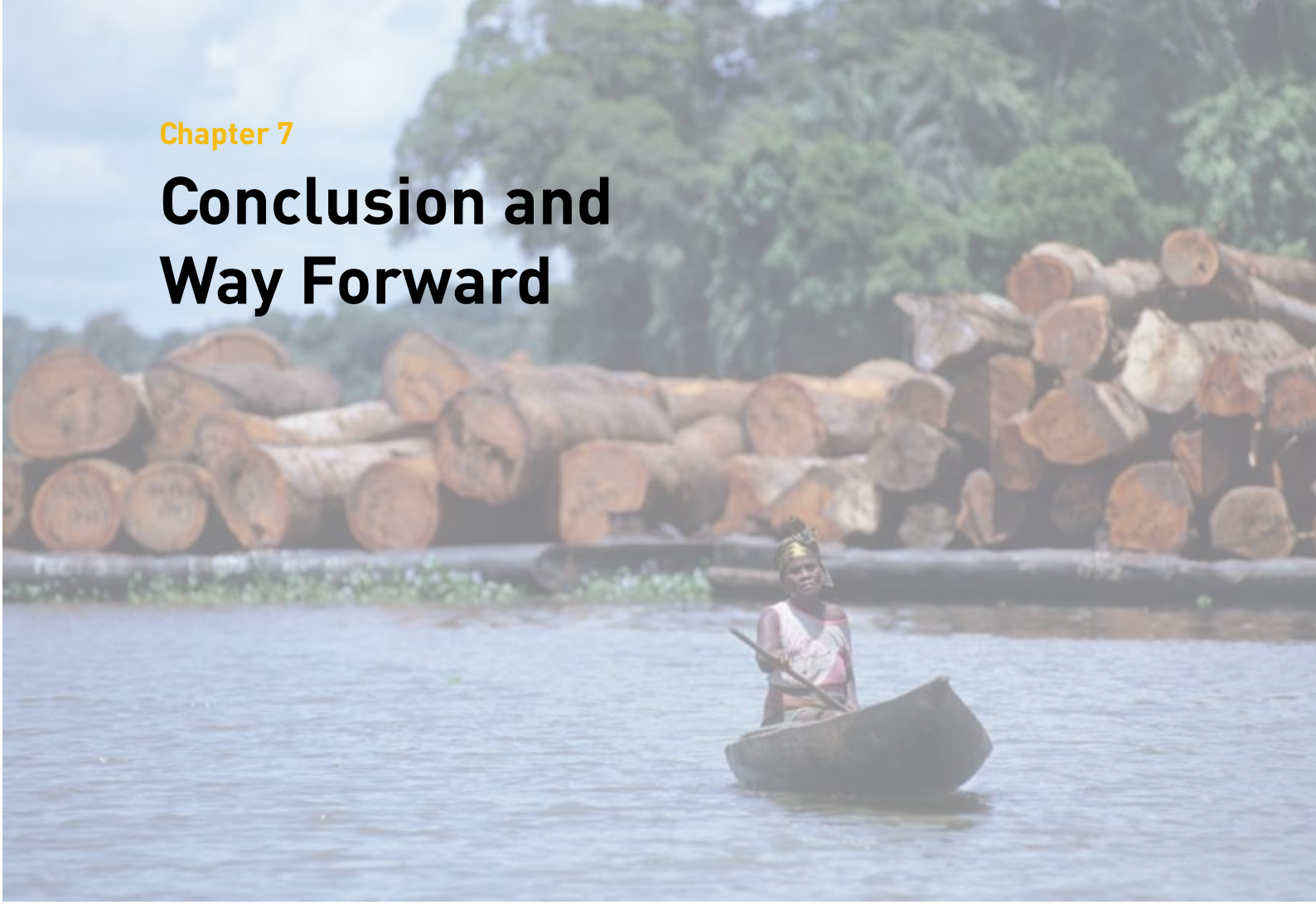
South Africa: Women analyse the budget and parliament takes their advice. The Women's Budget Initiative analyses allocations across sectors and assesses whether these are adequate to meet policy commitments. A collaborative venture involving parliament and civil society organisations, the initiative 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, in the process strengthening policy formulation overall.

Tanzania: Sustainable incentives for civil servants help improve service delivery. Government and donors have come together to institutionalise 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 harmonise their practices around national systems and strives to reduce distortions on the local labour market.

Kenya: Making the environment policy a mainstreaming tool. 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 the links between the environment sector and national development. The implementation will depend on the plans and budgets of sectors. Thus, the approach focuses on strengthening the environmental institutions to engage with them, including with the finance and planning bodies.

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

Table 6.3 Summary: What Does 'Meeting the Implementation Challenge' Encompass?	
Achievement	**Examples**
Poverty-environment indicators	• Tanzania's indicators of poverty-environment linkages (United Republic of Tanzania 2005a)
Integration of poverty-environment links 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' (REMA 2007)
Budgeting and financing for poverty-environment issues	• Increased revenues from the environment sector • Policy measures for poverty-environment issues are 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 links • Replication of successful policy measures
Establishment of poverty-environment mainstreaming as standard practice in government and administrative processes, procedures, and systems	• Mandates, reporting and monitoring, training, budget circulars, etc. • Strategy for long-term institutional and capacity strengthening
Involvement of stakeholders and development community	• Sub-national 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 proposed framework is composed of three key elements, each of which includes a set of activities and for which a range of analytic or process tactics, methodologies, and tools can be utilised.

- **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 to focus on, 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 a sector strategy, based on country specific evidence.
- **Meeting the Implementation Challenge** aims at ensuring poverty-environment mainstreaming into budgeting, implementation, and monitoring as well as the establishment of poverty-environment mainstreaming as standard practice.

The programmatic approach recommended in the handbook should be considered as a flexible model which helps guide the choice of activities, tactics, methodologies, and tools that can be deployed to address a particular country situation.

This 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 development priority 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 accrue. To keep information current, UNDP and UNEP plan to update this handbook, and to provide related guidance and technical support materials. For links to related documents produced by the UNDP-UNEP PEI 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 environment has been systematically integrated into PRSPs; economic arguments have been used to convince decision-makers to increase investment; key sector agencies have factored poverty-environment linkages into their programmes at the sub-national 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.

Acronyms

CDM	Clean Development Mechanism
EDPRS	Economic Development and Poverty Reduction Strategy (Rwanda)
ENR	Environment Natural Resource working groups
GDP	gross domestic product
GEF	Global Environment Facility
IEA	integrated ecosystem assessment
IPSD	Integrated Policy for Sustainable Development
IUCN	International Union for Conservation of Nature
MDG	Millennium Development Goal
MKUKUTA	National Strategy for Growth and Reduction of Poverty (Mkakati wa Kukuza Uchumi na Kupunguza Umaskini) (Tanzania)
MPND	Ministry of Planning and National Development
MTEF	Medium-Term Expenditure Framework
NAPA	National Adaptation Programme of Action
NEAP	National Environmental Action Plans
NGO	non-governmental organisation
NORAD	Norwegian Agency for Development Cooperation
ODI	Overseas Development Institute
OECD	Organisation for Economic Co-operation and Development
PEI	Poverty-Environment Initiative
PER	Public Expenditure Review
PRSP	Poverty Reduction Strategy Paper
SCP	sustainable consumption and production
SEA	Strategic Environmental Assessment
SWOT	Strengths, Weaknesses, Opportunities, and Threats
UN	United Nations
UNCT	United Nations Country Team
UNDG	United Nations Development Group
UNDP	United Nations Development Programme
UNEP	United Nations Environmental Programme
WRI	World Resources Institute
WWF	World Wide Fund for Nature

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, that is the activity, project, programme or policy measure generates net benefits, i.e., is profitable (Adapted from 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. Budgeting refers to 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 (adapted from *The Economist*). See also Medium-Term Expenditure Framework (MTEF).

Capacity assessment. A capacity assessment is 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. Carbon trading is 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 intra-company, domestic, and international levels. The IPCC 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 2008). See also Clean Development Mechanism.

Champions (poverty-environment). Champions are practitioners who take on the role of advocating for the integration of poverty-environment considerations into development planning at national, sector, and sub-national levels. They include high level decision-makers and government officials who serve as ambassadors for poverty-environment mainstreaming (UNDP-UNEP PEI).

Civil society. In 1992, at the United Nations Conference on Environment and Development (UNCED), governments agreed on the following definition of Major 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 organisations as well as 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 categorised under the following groups: service-delivery, representation, advocacy and policy inputs, capacity building and social functions (UNEP 2004). See also Non-governmental actors and Stakeholders.

Clean Development Mechanism (CDM). The Clean Development Mechanism under the Kyoto Protocol allow industrialised 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 it means that industrialised countries finance investments in renewable energy (e.g., wind, hydropower, and biomass energy), industrial processes and energy efficiency, waste management (i.e., landfill gas) or agriculture in developing countries (Adapted from Clean Development Mechanism 2008). See also Carbon trading.

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 2008).

Climate change mitigation. Mitigation is any anthropogenic intervention to reduce the sources or enhance the sinks of greenhouse gases (IPCC 2008).

Climate change. Climate change refers to 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 (UNFCCC), in its 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 UNFCCC thus makes a distinction between climate change attributable to human activities altering the atmospheric composition and climate variability attributable to natural causes (IPCC 2008).

Cost effectiveness analysis. Cost-effectiveness analysis is 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 (Adapted from Dixon, 2008, Dixon and Sherman 1991). See also Economic analyses.

Cost-benefit analysis. Cost-benefit analysis examines 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 (Adapted from Dixon, 2008, Dixon and Sherman 1991). See also Economic analyses.

Costing. Costing is 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 (UNDP-UNEP PEI).

Economic analyses. Economic analyses 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 resources will help them achieve key development goals, such as poverty reduction, food security, adaptation to climate change, and other measures of human well-being. See also Cost effectiveness analysis, Cost-benefit analysis and Environmental valuation (UNDP-UNEP PEI).

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 GDP per capita (or GNP 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 2008b).

Ecosystem. An ecosystem is a dynamic complex of plant, animal and micro-organism communities and their nonliving environment interacting as a functional unit (MA 2005). The organisms of a particular habitat, such as a pond or forest, together with the physical environment in which they live; a dynamic complex of plant, animal, fungal, and microorganism communities and their associated non-living environment interacting as an ecological unit define an ecosystem. 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 watershed, or an entire region could be an ecosystem (WRI 2005).

Ecosystem services. Ecosystem services are the benefits people obtain from ecosystems. These include:

- **Provisioning services.** The products obtained from ecosystems, including, for example, genetic resources, food and fibre, and fresh water.
- **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.

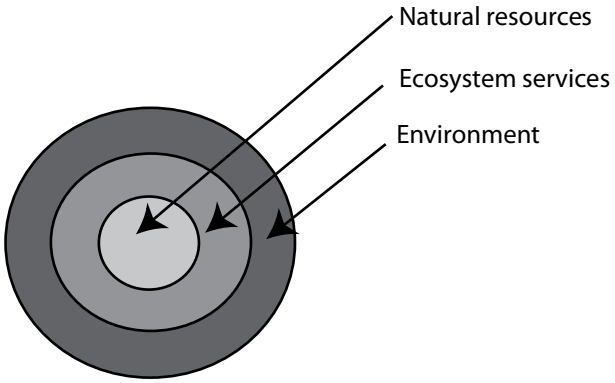
The human species, while buffered against environmental changes by culture and technology, is fundamentally dependent on the flow of ecosystem services (MA 2005).

See also Environment and Natural resources.

Entry points. Entry points to planning processes are opportunities for influencing decision-makers to consider poverty-environment 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 Millennium Development Goals-based national development strategy 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 (UNDP-UNEP PEI).

Environment. Environment refers to the living (biodiversity) and non-living components of the natural world, and to the interactions between them, that together support life on earth. The environment provides goods (See also Natural resources) 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 (adapted from DFID et al. 2002). On the other hand, the environment is subject to environmental hazards such as natural disasters, flooding and droughts and environmental degradation (e.g., soil erosion, deforestation).



Environmental accounting. Environmental accounting encompasses both national environmental 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 the corporation (OECD 1997).

Environmental fiscal reform. An environmental fiscal reform entails a wide range of taxation and pricing instruments, including taxes on the exploitation of natural resources (e.g., forests, minerals, fisheries), user charges and fees (e.g., water, 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., pesticides, water, energy) and general taxation aimed at improving environmental management (UNDP-UNEP PEI).

Environmental impact assessment. A study done to determine the probable environmental impact (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. Environmental mainstreaming is the integration of environmental considerations into [...] policies, programming and operations to ensure the coherence and sustainability of [...] the mission and practices (UNDP 2004). Environmental mainstreaming implies the integration of environmental tools and approaches in the cycle of operations in order to bring about a better harmonisation of environmental, economic and social concerns (European Commission 2007).

Environmental sustainability. Environmental sustainability refers to 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). This includes the existence and bequest values of the environment and the species it provides habitat for current and future generations.

Environmental valuation. Valuation is the process of placing monetary value on 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) (Adapted from Dixon, 2008, Dixon and Sherman 1991). See also Economic analyses.

Existence value. The benefit an individual or society receives from merely knowing that a good or service exist. This is a non consumptive, non excludable benefit. Existence values may be important reasons for protecting wildlife (Dixon and Sherman 1991).

Genuine savings. Savings are income not used for current consumption (World Bank 2008b). Genuine savings are savings once depletion of natural resources and environmental damages are subtracted from the gross savings of a country.

Growth Domestic Product (GDP). GDP represents the total final output of goods and services produced within the country's borders, regardless of whether ownership is by domestic or foreign claimants (Adapted from Dixon and Sherman1991).

Household poverty assessments. Household poverty assessments collect data on the determinants of poverty. Increasingly they include environment factors such as access to water and energy (Adapted from Brocklesby and Hinshlwood 2001).

Institutional and capacity strengthening or development. Capacity development is the process through which the abilities of individuals, institutions 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 organisations, groups and individuals to improve their performance and achieve their development objectives. This includes change within a state, civil society or the private sector, as well as a change in processes that enhance cooperation between different groups of society. Capacity development is a concept broader than organisational development since it includes an emphasis on the overall system, environment or context within which individuals, organisations and societies operate and interact (and not simply a single organisation) (UNEP 2002; UNDP 1997; UNDP 2007). See also Capacity assessment.

Integrated ecosystem assessments (IEAs). Integrated ecosystem assessments assess 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 (UNDP-UNEP PEI, MA 2005).

Integrated policy for sustainable development (IPSD). Integrated policy for sustainable development is a process that incorporates the main objectives of sustainable development—economic development, poverty reduction, and environmental protection—into policy actions. IPSD goes beyond assessment and evaluation by extending to

the whole process including agenda setting, policy formulation, decision making, implementation and evaluation (Naqvi 2007).

Internal rate of return (IRR). An evaluation criterion used in project, programme or policy measure analysis. The IRR is the discount rate at which the present value of benefits exactly equals the present value of costs. If the IRR is higher than the cost of capital or a predetermined rate of interest, the project, programme or policy measure is profitable (Adapted from Dixon and Sherman1991). See also Cost-benefit analysis.

Livelihoods. A livelihood comprises the capabilities, assets and activities required for a means of living. The resources 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. Mainstreaming is the process of systematically integrating a selected value, idea, 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. Market failure is a general term describing situations 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 that is socially desirable (OECD 1997; Dixon and Sherman 1991).

Medium-Term Expenditure Framework (MTEF). An MTEF consists of a top-down estimate of aggregate resources available for public expenditure consistent with macroeconomic 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 $n+3$). MTEF is a rolling process repeated every year and aims at reducing the imbalance between what is affordable and what is demanded by line ministries. Different countries call MTEF differently: multi-year expenditure framework, multi-year budget, forward budget, multi-year estimates and forward estimates among others (OECD 2008). See also Budgeting.

Millennium Ecosystem Assessment (MA). The Millennium Ecosystem Assessment is a global assessment of the earths ecosystems commissioned by the UN Secretary-General. The MA assessed the consequences of ecosystem change for human well-being. From 2001 to 2005, the MA involved the work of more than 1,300 experts worldwide. Their findings provide a state-of-the-art scientific appraisal of the condition and trends in the world's ecosystems and the services they provide, as well as the scientific basis for action to conserve and use them sustainably. The MA completed its work in 2005 with the publication of its report (UNEP 2006).

Multilateral Environmental Agreement. Multilateral Environmental Agreement is a generic term for treaties, conventions, protocols, and other binding instruments related to the environment. Often it is applied to instruments the geographic scope of which is

wider than a few Parties, but it is also used to include bilateral agreements (i.e., between two States) (UNEP 2006).

National Adaptation Programme of Action (NAPA). NAPAs provide 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 NAPA takes into account existing coping strategies at the grassroots level, and builds upon these to identify priority activities. The GEF is the financial mechanism of NAPA (UNFCCC 2008a).

National Communication. A national communication is a national report by the parties of the United Nations of Framework of Climate Change Convention to the conference of the parties (COP). The core elements of the national communications are information on emissions and removal of greenhouse gases (GHGs) 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. GEF provide financial assistance to the non-Annex I countries for the preparation of their national communications (UNFCCC 2008b).

National development planning. National development planning is defined as a comprehensive process from elaboration of a plan until implementation. It entails organising economic development 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), budgeting, implementation and monitoring, at various levels: national, sector, and sub-national (UNDP-UNEP PEI).

Natural resources. Natural resources are natural assets (raw materials) occurring in nature that can be used for economic production or consumption (UN 1997). See also Environment and Ecosystem services.

Net present value (NPV). A criterion used in project, programme or policy measure analysis. The NPV is 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 NPV is expressed in monetary terms and indicates the magnitude of net benefits generated by a project over time. An NPV greater than zero implies positive net benefits (Adapted from Dixon and Sherman 1991). See also Cost-benefit analysis.

Non-governmental actors. Non-governmental actors include all actors that are not part of the government, in the broadest sense, i.e., civil society, academia, business and industry, the general public and local communities, and the media (UNDP-UNEP PEI). See also Civil Society and Stakeholders.

Payments for Ecosystem Services (PES). Payments for ecosystem services, also called payments for environmental services, include a variety of arrangements through which the beneficiary of ecosystem services pay back the providers of those services. Payment schemes may be a market arrangement between willing buyers and willing sellers, intermediated by a large private or public entity or government-driven (WWF 2008).

Policy measure. Policy measures for poverty-environment refer to interventions supporting new policies or changes to existing policies, as well as broader policy reforms (e.g., agriculture policy) and public reforms (e.g., participation to 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 sub-national level (UNDP-UNEP PEI).

Policy. A policy is defined as a high-level strategic plan embracing general goals, targets, implementation strategies. Examples of policy documents include PRSPs, MDG strategies, and sector and sub-national strategies and plans (UNDP-UNEP PEI).

Poverty reduction strategy papers (PRSPs). Country-led, country-written documents that provide the basis for assistance from the World Bank and the International Monetary Fund (IMF), as well as debt relief under the Heavily Indebted Poor Country Initiative. A Poverty Reduction Strategy Paper 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.

Poverty. Poverty is widely viewed as encompassing both income and non-income dimensions 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 decisions that influence someone's life as well as extreme vulnerability to external shocks (DFID et al. 2002).

Poverty-environment indicators. Poverty-environment indicators are defined as measures of performance that show how environmental conditions affect the livelihoods, health, and the resilience of the poor to environmental risks. Poverty-environment indicators differ from other types of indicators by focusing on poverty-environment linkages, whether these linkages represent causal relationships between poverty and the environment or describe how environmental resources affect the poor's livelihoods, health, resilience to environmental risks or the economic development more broadly (UNDP-UNEP PEI).

Poverty-environment linkages. Poverty-environment linkages include livelihoods, resilience to environmental risks, health and economic development. Poverty-environment linkages are dynamic and context-specific - reflecting both geographic location, scale and the economic, social, and cultural characteristics of individuals, households, and social groups. The gender and age of the head of the household (that is, whether the head is female, male, or a child) are key factors influencing poverty-environment links (Brocklesby and Hinshelwood, 2001; UNDP and EC 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 sub-national 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 sub-national bodies; political parties and parliament; 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 (UNDP-UNEP PEI).

Poverty-environment monitoring. Monitoring refers to the continuous or frequent standardised measurement and observation of an issue, often used for warning and control. Poverty-environment monitoring refers to monitoring and reporting on poverty-environment linkages (Adapted from OECD 1997).

Practitioners. Stakeholders from the government (head of state's office; environment, finance, and planning bodies; sector and sub-national bodies; political parties and parliament; 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 (UNDP-UNEP PEI).

Programmatic approach. A programmatic approach refers to a medium- or long-term approach which includes a set of activities building on each other with the aim to achieve synergies and longer-term overall results that the various activities contribute to (UNDP-UNEP PEI).

Pro-poor economic growth. Growth is considered to be pro-poor if poor people benefit from it in absolute terms, which depends both on the rate of growth and on its distributional pattern (Adapted from Ravallion and Chen 2003; Kraay 2003; World Bank 2007b). Ignoring the quality of growth, and in particular the erosion of environmental assets of the poor, even if it may enhance short-term economic gains, undermines growth itself and its effectiveness in reducing poverty (DFID et al. 2002).

Public Expenditure Review (PER). A public expenditure review analyses public sector issues in general and the public budget in particular. PERs typically analyse and project tax revenue, determine the level and composition of public spending, assess inter-sector and intra-sector allocations (agriculture, education, health, roads) and review financial and non-financial public enterprises, the structure of governance, and the functioning of public institutions (World Bank 2007b).

Stakeholders. Stakeholders include all parties involved in a certain process, and the groups and individuals that have something at stake in the process. Stakeholders include government actors (head of state's office; environment, finance, and planning bodies; sector and sub-national bodies; political parties and parliament; statistics office; and judicial system), non-governmental actors (civil society, academia, business and industry, the general public and local communities, and the media) as well as the development community (UNDP-UNEP PEI). See also Civil Society and Non-governmental actors.

Strategic Environmental Assessment (SEA). SEAs refers to 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. SEA can be described as a family of approaches which use a variety of tools and is adapted and tailor-made to the context or policy process to which it is applied (OECD 2006). Used in the context of poverty-environment mainstreaming, an SEA can also be useful to systematically review a policy process or document to identify poverty-environment contributions and refine priorities accordingly.

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

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

Twinning. Twinning provides a framework for organisations to 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 institution capacity building in order to develop administrative structures, human resources and effective management skills needed to manage or implement a specific action or project. Twinning normally involves study visits and the secondment of national experts but can also be in the form of 'eTwinning' which is a web based exchange of national experiences (European Commission 2008).

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