Global Environment Facility

GEF Council
November 19-21, 2003

MEASURING RESULTS OF THE GEF BIODIVERSITY PROGRAM

(Prepared by the GEF Monitoring and Evaluation Unit)

Measuring Results of the GEF Biodiversity Program

Monitoring and Evaluation Working Paper 12
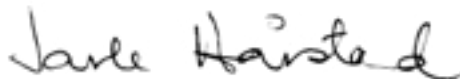
August 2003

Preface

Upon the request from the GEF Monitoring and Evaluation unit the GEF Biodiversity Task Force formed a Biodiversity Indicators Steering Committee, which was given the task of developing a methodology to assist in measuring and evaluating the impact of the GEF-funded biodiversity program. The Steering Committee included representatives from the three GEF Implementing Agencies (UNDP, UNEP, World Bank) and the GEF Secretariat. The UNEP World Conservation Monitoring Center (UNEP-WCMC) was contracted to provide technical assistance to the group.

Measuring Results of the GEF Biodiversity Program is the culmination of a long and substantive process to identify indicators to measure the results of the GEF supported interventions in biodiversity. The framework proposes three types of indicators: coverage (where the GEF is intervening), impact of the program and context (wider global context in which the first two exist and within they will be reported). The framework should not be seen as static or prescriptive framework. The challenge of monitoring biodiversity through indicators is not unique to the GEF; the larger conservation community faces it too. Nevertheless, we hope that this framework will serve as a critical stepping-stone in the right direction. The real test of any indicator framework lies in a practical and flexible application of the framework, emphasizing learning and adaptation through the process of its application. The current framework and menu of indicators has already been used for the third replenishment of GEF Biodiversity Strategic Priorities. It is anticipated that it will also be used for the next biodiversity program study scheduled for 2004. This proposed framework should also be considered complementary to the GEF Implementing Agencies' project monitoring for biodiversity impacts. It is expected that each GEF project will have indicators and data, which will feed into the proposed framework.

This report should be regarded as a work in progress. It will be reviewed periodically and improved as new scientific knowledge and project implementation experiences become available. We would therefore appreciate your feedback and suggestions.

I want to thank those who participated in the Steering Committee and the drafting of the report.

Jarle Harstad

Senior Monitoring and Evaluation Coordinator

Monitoring and Evaluation Unit
Global Environment Facility
1818 H Street, NW
Washington, DC 20433
USA
Telephone: (202) 458-4619
Fax: (202) 522-3240
http://www.gefweb.org

Acknowledgements

Table of Contents

Executive Summary

Introduction

This document aims at developing a framework to measure results of the implementation of the GEF biodiversity program. The framework and proposed methodology presented here are intended to be applied for reporting results in the annual review of GEF projects and biodiversity program studies. It should be considered complementary to the Implementing Agencies' project monitoring and the scientific community monitoring of biodiversity trends. It is expected that this work will benefit current and ongoing discussions in the scientific community on ways of measuring program-level performance, particularly that related to biodiversity.

The framework is the result of a long process involving discussions and inputs from technical specialists of the GEF Secretariat, Implementing Agencies, and external consultants. Therefore, the report presents this group's joint response to GEF's specific needs. Furthermore, as a work in progress, this report will need to be reviewed periodically and hopefully improved as new scientific knowledge and project implementation experiences become available. The report also attempts to identify some of the major gaps in program indicators and proposes some ideas on how to move forward.

Assessing GEF's impact on biodiversity

The GEF's mission in the area of biodiversity is to support activities that primarily seek to reduce the rate of biodiversity loss attributable to human actions. Ideally, assessing GEF's impact could be measured by assessing changes in biodiversity itself. However, the various levels and timeframes in which biodiversity is defined as well as the variety of GEF supported activites make this difficult. Furthermore, although the GEF is one of the major contributors to the achiviement of the Convention on Biological Diversity goals others also participate. Instead, changes in human behavior (changes in pressures and responses) are proposed to be used as a proxy or indirect measure of changes in biodiversity.

Activities supported by the GEF usually address more than one level of biodiversity (ecosystems, species, and genes) and often more than one objective (conservation, sustainable use, and equitable sharing of benefits arising from the use of genetic resources), which makes measuring impacts at the aggregate or programmatic level even more challenging. Consequently, the GEF Biodiversity Indicators Steering Committee developed a logical framework (see Table A) to capture program-level achievements.

The proposed logical framework is organized at three different spatial scales (global, regional or national, and local) representing the levels in which GEF-supported activities are implemented and impacts are achieved. In addition to each project's direct impacts and achievements, GEF projects produce additional results, individually and as a program, through catalytic effects and replication. The aggregation of direct impacts and those resulting from a larger program's catalytic effects provides the basis for measuring the results of the GEF-supported biodiversity program.

The GEF biodiversity portfolio is composed of a wide diversity of projects that aim to produce different types of outcomes. A recent review of the portfolio (projects approved from FY91 to FY02) concluded

that the GEF, in applying its biodiversity program strategy, has focused principally on achieving four types of outcomes:

- Establishing and extending protected areas and improving their management

- Conserving biodiversity and ensuring sustainable use of its components in the production environment (landscapes and seascapes)

- Improving the enabling environment at global, regional, and national levels

- Facilitating fair and equitable sharing of the benefits arising from the use of genetic resources (as defined under the Convention on Biological Diversity).

Table A. Logical Framework Used to Develop GEF Biodiversity Program Indicators

	Framework level	**Assumptions and risks**
Global	**Global objective or goal:** Reduce the rate of biodiversity losses due to human activities through conservation, sustainable use and benefit sharing of genetic resources	This global objective can only be achieved through commitments made by all individual countries party to the Convention on Biological Diversity and other relevant international agreements. The GEF is one of the major financial contributor, but just one actor, in trying to achieve this goal. Measurement of the status of biodiversity at the program level (i.e., global scale) is not yet technically possible.
National & regional	**Development Objectives: GEF biodiversity program strategy** The GEF contributes to achieving the global goal by attempting to change human behavior through the achievement of project outcomes and their catalytic impacts.	Aggregation of outcomes from individual projects is possible at the national, regional, or in some cases at the ecosystem levels. Through replication, catalytic effect, fringe effects and benefits, the GEF supported projects have been able to produce additional impacts. The GEF program strategy responds to the mandate of the CBD Conference of the Parties.
Projects (GEF unit of operations)	**Outcomes:** GEF projects in the biodiversity focal area have supported, in general terms, four types of outcomes, in response to the GEF biodiversity program strategy: 1. establishment and extension of protected areas and improvement of their management; 2. conservation of biodiversity and ensuring sustainable use of its components in the production environment 3. improvement of enabling environment; 4. fair and equitable sharing of the benefits arising from the use of genetic resources	The individual projects are designed within national contexts, and as country driven priorities. Reduction of biodiversity loss can be accomplished by: - Protected areas which are an effective means of reducing ecosystem loss and degradation and reducing species loss; - Conservation and sustainable use in the production environment. - Changes in the enabling environment (defined in a broad sense). - Fair and equitable sharing of the benefits arising from the use of genetic resources. There is a causal link between individual project outcomes and their catalytic impacts. Information is collected at the project level and is therefore available.
	Outputs: direct or indirect results of projects	Projects outputs are necessary and sufficient to change behavior
	Inputs: specific project activities	Proposed project activities are sufficient to produce project outputs.

Measuring Results and Impacts

7.   Three approaches to measure results of the GEF biodiversity program have been selected: coverage, impacts, and the wider global context in which the first two exist and are reported:[1]

- Coverage: a reflection of what the GEF is doing and in what areas. These indicators are all quantitative in nature, for example, expressed in cumulative numbers of protected areas and hectares of protection.

- The *impact* of the GEF biodiversity program is measured to understand whether progress has been made toward meeting the GEF's objectives. The measurements are estimated at the project level (impacts generated from each project) and at the program level (catalytic impacts). Because changes in human behavior are used as proxies for changes in biodiversity, assessing GEF program impacts requires assessing GEF's contribution to those changes in behavior.

- *Context* indicators are those used by the world at large to track general trends in biodiversity and related issues. They provide a baseline against which the results of GEF efforts can be measured.

Menu of Indicators

8.   A menu of coverage, impact, and context indicators for measuring results of the GEF biodiversity program is presented in the tables B, C, D, and E. Monitoring their change or trend over time at the national and/or regional levels will provide the basis to measure the impact and result of the GEF biodiversity program. These indicators were developed in relation to the four groups of outcomes identified for the biodiversity program.

Table B. Proposed GEF Program Indicators for Outcome 1: Establishing and extending protected areas and improving their management

Indicators	Assumptions and risks
Coverage Number of projects addressing protected areas and number and hectares of protected areas Number of projects addressing protected areas under a particular IUCN management category (or national equivalent) and number of hectares. Number of projects addressing protected areas under any "global priority lists" (i.e., World Heritage sites, Ramsar, MAB, hotspots) and number of hectares.	Increasing the amount of area under protection is an effective means of reducing ecosystem and species loss and degradation. Higher IUCN management categories represent a more effective means of protection, and reduction in ecosystem loss, degradation, and species loss.
Impact Improvement in management effectiveness of protected areas receiving GEF support according to WWF/WB scorecards measured at three times during project implementation: initial (baseline), mid-life, and final stage of project Change in number and hectares of protected areas by IUCN management category resulting from GEF interventions	Management effectiveness scorecard results reflect the effectiveness of ecosystem and species conservation afforded by a protected area and can be obtained in a consistent manner over time. Higher IUCN management categories represent a more effective means of reducing ecosystem loss and species loss and degradation.
Context Changes in the total number and hectares of protected areas in GEF recipient countries Changes to extent of protected areas by IUCN management category in GEF recipient countries	
Proposed Indicator: Conservation Quality Index - aggregate or scorecard index to address the degree to which impacts reflect priorities	

---

[1]   These three levels are also related to the traditional pressure-state-response framework for indicators.

Table C. Proposed GEF Program Indicators for Outcome 2: Conserving and ensuring sustainable use of biological resources in the production environment (landscapes and seascapes)

Indicators	Assumptions and risks
Coverage Number of projects, areas and hectares addressing the production environment and biodiversity (i.e., landscape, seascape) Number of projects addressing conservation and/or sustainable use of wild species	Promoting conservation and sustainable use of biodiversity in the production environment can help halt the loss and degradation of biodiversity overall.
Impact Change in areas (i.e., hectares) of production environment receiving GEF funding: - Under verified sustainable management (i.e., the area under GEF support has a sustainable use plan under implementation and a monitoring and evaluation system) - In transition towards verified sustainable management (i.e, the area under GEF support has a sustainable management plan but is not under implementation) - With integrated zoning plans that adequately reflect biodiversity considerations Change in area for agribiodiversity under or in transition to verified sustainable management systems Number of countries that have joined CITES or improved enforcement of CITES with GEF support	Existing verification systems cover all production systems in which GEF works, such as croplands, production forests, rangelands and pasture, inland and marine fisheries areas. Implementation, monitoring, and evaluation of sustainable use management plans for biological resources are necessary for certifying a production environment. Zoning plans are implemented and deliver biodiversity benefits. Enforcement of CITES ensures the sustainable use of the species concerned.

Context:
Changes since the onset of GEF support in the areas of production environment (at the national or aggregate level within GEF recipient countries):
 	
    - Under verified sustainable management
 	
    - In transition towards verified sustainable management
 	
    - With integrated zoning plans that adequately reflect biodiversity considerations
 	
    - Of importance for agricultural biodiversity under or in transition to verified sustainable management systems.
 	
Number of GEF recipient countries that have joined CITES or improved enforcement of CITES within the study period.	

Proposed Indicators - <u>Production Quality Index</u> - degree to which the production environment is addressing conservation priorities. - A scorecard system to provide a sustainable management effectiveness tool for assessing trend towards more effective management, analogous to that used for assessing management effectiveness in protected areas is likely to be the best approach, but making such a system operational is not a trivial undertaking.	

Table D.a. Proposed GEF Program Indicators for Outcome 3: Improving enabling environment (through action at national and local levels).

Indicators	Assumptions and risks
Coverage Number of projects that include among their objectives reform of sectoral policies, laws, and regulations to reflect biodiveristy considerations. Number of projects aiming to develop capacity to manage biological resources at any of the three levels (individual, institutional, systemic) Number of projects aiming to enhance public awareness and/or formal education about biodiversty. Number of projects addressing financial arrangements for conservation and sustainable use of biological resources. Number of NBSAPs supported by GEF.	Capacity will be retained and used within the sector (no "brain drain"). Institutions are the critical link between individual and systemic level capacity; they are strengthened if they have the capacity to interact within the decision-making process of other institutions Inclusion of financial arrangements increases long-term sustainability of biodiversity conservation activities. The mere preparation of NBSAPs has forced a national debate on biodiversity issues.
Impact Changes in sectoral policies, laws and regulations to reflect biodiversity considerations (i.e. number of relevant sectoral policies, laws and regulations that have moved along the pathway from drafting to enforcement with GEF support). Number of NGOs implementing GEF projects Number of countries with inter-minsterial arrangements to assess capacity needs. Timeliness of submission of national reports to CBD by GEF supported countries. Leveraging of national funding for biodiversity (i.e. changes over time of national sources co-financing in GEF projects).	Explicit reference to biodiversity in sectoral policies may or may not imply action; actual impact of policies and measurement of effectiveness may take longer than the life of the project Increased timeliness represents improvements in capacity and engagement with the CBD process National co-financing represents increased commitment to biodiversity on the part of the government and other national actors. Measuring changes in the enabling environment and aggregating these to program level is not straightforward.
Context Number of countries with national laws or policies on conservation and sustainable use of natural resources/biological resources Change in national investment in biodiversity-related activities since the onset of GEF-supported activities within the country Number of NBSAPs prepared in GEF recipient countries (supported or not by GEF) Numbers of individuals with biodiversity expertise listed in national and global databases.	

Table D.b. Proposed GEF Program Indicators for Outcome 3: Improving the enabling environment (through action at international levels)

Indicators	Assumptions and risks
Changes to international policy and trade regimes that make them more supportive of the objectives of the CBD (impact where GEF influence can be identified) Change in number of international information exchange systems relevant to biodiversity since entry into force of CBD (and change in those supported by GEF) Number of international biodiversity assessments undertaken since entry into force of the CBD (and number supported by GEF) Number and impact of publications in refereed scientific literature concerning biodiversity and its management resulting from initiatives that have received GEF support.	Changes in international regimes will lead to actions that improve the status of biodiversity International information exchange mechanisms will be used to enhance management of biodiversity International biodiversity assessments will be used to enhance management of biodiversity Impact in the scientific community has an impact on management of biodiversity

Table E. Proposed GEF Program Indicators for Outcome Group 4: Facilitating fair and equitable sharing of the benefits arising from the use of genetic resources

Indicators	Assumptions and risks
Coverage. Number of projects addressing the sharing of benefits arising out of genetic resources as defined by CBD **Impact** - Number of agreements on access and benefit sharing concluded with GEF support - Dollar value of benefits transferred under agreements on access and benefit sharing concluded with GEF support	Access and benefit sharing (ABS) agreements and their implementation actually improve fairness of benefit sharing. Any benefits transferred are equitably distributed
Context: Number of agreements on access and benefit sharing concluded by countries since the onset of GEF support Dollar value of benefits transferred under agreements on access and benefit sharing concluded involving at least one country with GEF support since onset of support	

Other topics not addressed in the proposed methodology

The framework and indicators presented in this document are not sufficient to address the full range of possible questions about GEF impacts on biodiversity. In particular, many changes in the enabling environment, such as policy changes, increasing stakeholder involvement, and alterations in institutional capacity are not directly amenable to quantitative analysis with the tools and reporting approaches currently available and proposed here.

Both detailed case studies and new analytical tools are needed. Furthermore, the connections between changes in the enabling environment and changes in biodiversity status require further in-depth investigation.

The indicators are likely to be only partially effective in capturing the collateral impacts of projects. Special-purpose-designed studies are needed to elucidate

these, as well as to build a portfolio of case studies. Similar approaches are needed to facilitate lesson learning among projects; quantitative reporting does not provide enough information about which approaches are most successful under what circumstances.

The indicators proposed here also do not address GEF's impact on the root causes of biodiversity loss, such as climate change or socioeconomic activities. Special studies on the impacts and interactions between GEF focal areas may be advisable in this respect.

Strategies for generating and expressing indicators

Each of the proposed indicators described above has specific data requirements. To generate the indicators, these data will have to be acquired and maintained in a suitable form. Monitoring GEF's activities and impacts over time requires information on individual projects' accomplishments, aims, and outcomes through: baseline data, reference data, implementation or project lifetime data, post-completion project impacts, and context data.

The relative importance of these data types differs among coverage, impact, and context indicators, with reference data being fundamental to coverage indicators as well as to context indicators, while baselines, project implementation and post-completion project impact data

are especially important for impact indicators. For each indicator category, however, there are two general kinds of data: those that can be generated from project reporting, either as it is currently carried out or in modified form, and those that are beyond the responsibility of individual projects with a finite lifespan to collect and report. Different strategies for gathering the data are required in each case.

Implementation of proposed framework

The first step of measuring GEF program-level impacts on biodiversity is to operationalize as many indicators as possible. This should be done in a semi-structured, dynamic, and adaptive way rather than prescriptive way. The GEF M&E Unit and the Biodiversity Indicators Steering Committee should take a central role in developing operational guidelines for the proposed indicators as well as participating in the application of these guidelines and annual reporting of results. The upcoming review of the GEF Biodiversity Program (Biodiversity Program Study 2004) will be the best opportunity to apply the concepts and indicators proposed in this document. Setting indicators for the strategic priorities for the third replenishment of the GEF (2003-2005) was another opportunity for applying the proposed framework.

1.   Introduction

This document is a first attempt by the Global Environment Facility (GEF) to develop a framework to measure results of the implementation of the GEF biodiversity program. The biodiversity program has been evaluated previously (the 2001 *Biodiversity Program Study*, for example), but there has not been a systematic way of reporting results of impacts. In fact, several evaluations have noted that the GEF needs to develop performance indicators for all focal areas. The framework and proposed methodology presented here are intended to be applied for reporting results in the annual review of GEF projects and future biodiversity program studies. It should be considered complementary to the Implementing Agencies' project monitoring and the scientific community monitoring of biodiversity trends. While the GEF Council is the main audience of this report, it is expected that this work will benefit current and ongoing discussions in the scientific community on ways of measuring program-level performance, particularly that related to biodiversity.

The framework is the result of a long process involving discussions and inputs from technical specialists of the GEF Secretariat, Implementing Agencies, Scientific Technical Advisory Panel (STAP), and external consultants. Therefore, the report presents this group's joint response to GEF's specific needs. Furthermore, as a work in progress, this report will need to be reviewed periodically and hopefully improved as new scientific knowledge and project implementation experiences become available. The report also attempts to identify some of the major gaps in program indicators and proposes some ideas on how to move forward. Finally, the report proposes how, specifically, to operationalize the framework within the GEF family.

2.   Background

In early 2000, the GEF Monitoring and Evaluation (M&E) unit formed a Biodiversity Indicators Steering Committee with the objective of developing a methodology to assist in measuring and evaluating the impact of the GEF-funded biodiversity program. The Steering Committee included representatives from the three GEF Implementing Agencies (UNDP, UNEP, World Bank) and the GEF Secretariat, specifically members of the biodiversity and M&E teams. The UNEP World Conservation Monitoring Center (UNEP-WCMC) was contracted to provide technical assistance to the group.

The GEF Biodiversity Indicators Steering Committee met on several occasions since then. By June 2000, an initial set of "coverage" indicators was developed and presented in the GEF M&E- supported *Biodiversity Program Study* (2001). Among other lessons, the study revealed evidence that the GEF biodiversity portfolio has involved a great breadth of activities and impacts, and that updating and verifying the indicators

will only increase evidence of the importance and impacts of GEF in conserving global biodiversity. In addition, the *Second Overall Performance Study* (OPS2), the annual *GEF Portfolio Performance Report* (PPR), and GEF replenishment process strongly recommended the development and adoption of indicators for the GEF biodiversity program to assess its impact.

In November 2001, the Biodiversity Indicators Steering Committee met to expand on the initial set of indicators. During this meeting, a preliminary conceptual logical framework was developed. In addition to establishing the basis for refining indicators, the logical framework serves as a guide for analyzing and reporting impacts. Subsequent meetings of the Steering Committee refined this initial work, and the present framework was finalized at the group's last meeting in April 2002. It is expected that the framework presented here will be implemented during the 2004 Biodiversity Program Study.

3.   The GEF and Biodiversity

Biological diversity, or biodiversity, is defined in Article 2 of the Convention on Biological Diversity (CBD) as:

> *"the variability among living organisms from all sources including, inter alias, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems."*

Within the context of the Convention, biodiversity is therefore generally thought of at three separate, though interlinked levels: genes, species, and ecosystems.

It is widely recognized, and explicitly acknowledged in the preamble to the CBD, that biodiversity has a wide range of values and that it is being significantly reduced by human actions. The CBD is a mechanism to address this loss, through three objectives: the conservation of biodiversity, the sustainable use of its components, and the fair and equitable sharing of benefits arising from the use of genetic resources. The Convention notes that developing countries (in which much of the world's biodiversity occurs) have, as first and overriding priorities, economic and social development and poverty eradication. The Convention established a mechanism for providing new and additional financial resources to help these countries pay for the incremental costs of measures to achieve agreed global benefits in the area of biodiversity: the Global Environment Facility.

The GEF is an instrument for international cooperation for the purpose of providing new, and additional, grant and concessional funding to meet the agreed incremental costs of measures to achieve agreed global environmental benefits in biodiversity, as well as climate change, international waters, ozone layer depletion, land degradation and the removal of permanent organic pollutants. In carrying out its mission relative to biodiversity, the GEF adheres to key operational principles set out in the CBD, the GEF Instrument, and GEF Council decisions.

What the GEF does with respect to biodiversity

The GEF's objectives with respect to biological diversity derive from the objectives of the CBD. As well as operating the financial mechanism of the CBD, the GEF supports other activities to help meet global environmental benefits in the area of biodiversity. Although the GEF is the financial mechanism of the Convention it is not the sole party seeking to achieve the Convention's goals. Through their own financial resources and bilateral assistance, parties to the Convention are also contributing to these goals.

The GEF sets out to meet these objectives through the implementation of a biodiversity program that comprises a portfolio of projects, which are overseen by three GEF Implementing Agencies and Executive Agencies[2] – UNDP, UNEP and the World Bank – and carried out by a wide range of executing agencies. GEF activities are largely country-driven,

---

[2]   Executive Agencies under the policy of expanded opportunities (see GEF Council document 3 from May 1999): four regional development banks (IADB, AfDB, ADB, EBRD), UNIDO, FAO, and IFAD.

so that recipient countries are responsible for setting priorities, and reflect the detailed guidance issued by meetings of the Conference of the Parties (COPs) to the CBD. Many different kinds of projects and project activities take place under the umbrella of the GEF biodiversity program.

The GEF's operational programs for biodiversity conform to the ecosystem approach adopted by the CBD. There are currently five biodiversity operational programs that address ecosystems prioritized by the Convention, along with an integrated ecosystem program:

- arid and semi-arid ecosystems
- coastal, marine, and freshwater ecosystems
- forest ecosystems
- mountain ecosystems
- conservation and sustainable use of biological diversity important to agriculture
- integrated ecosystem management.

Each operational program emphasizes site-specific activities or national-level reforms, particularly in relation to two measures central to biodiversity: long-term protection and sustainable use.

4. Assessing the GEF's Impact on Biodiversity

The mission of the GEF in the field of biodiversity is to reduce the rate of biodiversity loss attributable to human actions. Assessing GEF's impact on biodiversity should ideally be done by assessing changes in biodiversity itself. Two fundamental questions emerge:

*   How has the state of biodiversity changed?

*   What has been GEF's contribution to that change?

These questions can be asked at many different scales, both spatial and temporal, and in a number of different contexts. However, the complexity of biodiversity means it cannot be considered as a single entity (see below). The relationships between the complex, multidimensional nature of biodiversity identified in the Convention and its three separate, though interlinked objectives, are mapped in Table 1. Each numbered cell represents a potential area for GEF intervention.

To measure the impact of GEF with respect to biodiversity, the outcome of any GEF-supported activity or intervention should ultimately be connected to one or more of these cells. Different stakeholders may place different emphasis on the relative importance of each of these cells. Furthermore, some, notably cells 7 and 8, do not have a clear meaning under current interpretations of equitable sharing of benefits arising from the use of genetic resources and are still under discussion in the context of the Convention.

These levels of intervention generate meaningful questions at a range of different scales and in a number of different contexts. For example:

*   How has the GEF contributed to the conservation of ecosystems globally (1)?

*   How has the GEF contributed to the conservation of ecosystems in Africa (1)?

*   How has the GEF contributed to the sustainable use of species in arid and semi-arid ecosystems (5)?

Table 1. Interrelationships between the objectives of the CBD and levels of biodiversity

	Conservation of biodiversity	**Sustainable use** of the components of biodiversity	**Equitable sharing of the benefits** arising from the use of genetic resources
Ecosystems	1	4	7
Species	2	5	8
Genes	3	6	9

- How has the GEF contributed to equitable sharing of benefits from use of genetic resources in country *x* (9)?

31. Each of these levels of interventions can also be placed in its own wider context, against which GEF's contribution can be assessed. For example:

- What are the global trends in the conservation status of species (2)?

- What are the trends in sustainable use of ecosystems in country *z* (5)?

- What are the trends in access and benefit sharing related to genetic resources in South America? (9)

Questions about GEF's particular contributions can also be addressed in terms of the actions it has taken and impacts it has had on human behaviors that contribute to biodiversity loss.

Measuring changes in biodiversity

Biodiversity is a vast, nearly all-embracing concept for which no single quantitative measure exists. Measuring changes in biodiversity therefore entails first deciding which particular aspect or aspects of biodiversity are to be measured. These aspects may include different degrees of complexity, for example, the genetic diversity of a wild relative of an important food plant, the population numbers of a particular highly threatened species, or the ecosystem processes in a given region.

It might be expected that, in general, changes in one aspect of biodiversity should be positively correlated with changes in another, but this is not necessarily the case. For example, restoration of the natural flood regime of a river catchment may actually have a negative impact on populations of some threatened species within that catchment. Similarly, improvement in habitat availability for one threatened species in a given area may decrease habitat suitability for another threatened species.

Virtually all measures of biodiversity also show natural variation at a wide range of temporal and spatial scales. The time scales on which meaningful change in different attributes of biodiversity can be measured are consequently variable. In many cases, they may be significantly longer than that of a normal project cycle.

Even where a decision has been made concerning which aspects of biodiversity to measure, a major impediment is the absence of both baseline data and consistent monitoring. This impediment exists at all levels, from local to global, and is addressed in more detail below.

Measuring changes in human behavior

Changes in human behavior (that is changes in pressures and responses) are often used as a proxy or an indirect measure of changes in biodiversity to help with the challenge of measuring changes in biodiversity itself. Of course, this requires inferring that the measured change in human behavior can be

---

Impacts on Behavior

Impacts on behavior can be exerted at all societal levels, from the individual through the community and institutional to the systemic. Generally, ground interventions (that is, those involving field-based projects) will be expected primarily to affect behavior of individuals and local institutions. Such interventions may affect behavior that has a direct impact on biodiversity (for example, support for fisheries enforcement officers to reduce illegal, destructive fishing methods) as well as the local enabling environment (like educating and encouraging fishers to develop their own sustainable fisheries management regimes). National-level interventions in general address the wider enabling environment and attempt to affect systemic behavior (through national policies, for example) and the behavior of national institutions. However, if successful, such interventions should ultimately manifest themselves in changes in individual behavior, such as the reform of national education policies to include biodiversity in school curricula, which should ultimately affect the behavior of those taught under the changed curriculum.

predictably and causally linked to given changes in biodiversity. Such inferences may be drawn from experimental evidence or theoretical argument.

Some inferences may be relatively defensible and straightforward; for example, a reduction in fishing effort or a decrease in the minimum mesh diameter of nets used in a fishery will lead to increased recruitment into a target fish population. Nevertheless, the less direct the impact on biodiversity of a given set of

Table 2. Logical Framework Used to Develop GEF Biodiversity Program Indicators

	Framework level	**Assumptions and risks**
Global	**Global objective or goal:** Reduce the rate of biodiversity losses due to human activities through conservation, sustainable use and benefit sharing of genetic resources	This global objective can only be achieved through commitments made by all individual countries party to the Convention on Biological Diversity and other relevant international agreements. The GEF is one of the major financial contributor, but just one actor, in trying to achieve this goal. Measurement of the status of biodiversity at the program level (i.e., global scale) is not yet technically possible. Any measure of biodiversity improvements can only be done over long time-scales.
National & regional	**Development Objectives: GEF biodiversity program strategy** The GEF contributes to achieving the global goal by attempting to change human behavior through the achievement of project outcomes and their catalytic impacts.	Aggregation of outcomes from individual projects is possible at the national, regional, or in some cases at the ecosystem levels. Through replication, catalytic effect, fringe effects and benefits, the GEF supported projects have been able to produce additional impacts. The GEF program strategy responds to the mandate of the CBD Conference of the Parties.
Projects (unit of operations)	**Outcomes:** GEF projects in the biodiversity focal area have supported, in general terms, four types of outcomes, in response to the GEF biodiversity program strategy: 1. establishment and extension of protected areas and improvement of their management; 2. conservation of biodiversity and ensuring sustainable use of its components in the production environment 3. improvement of enabling environment; 4. fair and equitable sharing of the benefits arising from the use of genetic resources	The individual projects are designed within national contexts, and as country driven priorities. Reduction of biodiversity loss can be accomplished by: - Protected areas which are an effective means of reducing ecosystem loss and degradation and reducing species loss; - Conservation and sustainable use in the production environment. - Changes in the enabling environment (defined in a broad sense). - Fair and equitable sharing of the benefits arising from the use of genetic resources. There is a causal link between individual project outcomes and their catalytic impacts. Information is collected at the project level and is therefore available.
	Outputs: direct or indirect results of projects	Projects outputs are necessary and sufficient to change behavior
	Inputs: specific project activities	Proposed project activities are sufficient to produce project outputs.

changes in behavior is expected to be, the more problematic measuring (or assessing) the changes' impact on biodiversity is.

Using a logical framework approach

GEF-supported activities usually address more than one level of biodiversity and often more than one of the objectives set out in Table 1, making the measurement of impacts of projects even more complex. A simpler approach is therefore necessary. The Biodiversity Indicators Steering Committee developed a logical framework to enable aggregating coverage and impact at the project level and capturing program-level achievements.

The proposed logical framework (Table 2) is organized at three different spatial scales: (i) global (objectives and impacts at the scale of the CBD), (ii) regional or national, and (iii) local. Most GEF-supported projects involve site-specific interventions; thus, their outcomes are manifested mostly at the local level. There are also GEF activities that are broader in scope and have country, regional, and global-level outcomes. The impacts and results of the GEF program as a whole are measured by aggregating the individual outcomes of the projects plus any national and regional changes in behavior due to GEF's replicative and catalytic effects (see below). The present document presents a methodology that fully captures these impacts and results and assists in reporting them to the GEF Council and public at large.

There are several assumptions involved in using this logical framework approach to develop indicators of GEF's impact at the program level. The most important of these is that the identified clusters of outcomes are indeed effective means of reducing the loss and degradation of biological diversity. Secondly,

it is assumed that individual project outcomes can be aggregated at national, regional, or ecosystem levels. Finally, there is an assumption that the impacts of the GEF biodiversity program are more than the sum of its parts (projects) because of its magnitude and extent and because of the resulting "collateral" impacts or leverage that complement the direct project outcomes. A causal link between individual projects' outcomes and the replication effects and other collateral impacts is also assumed.

The wide diversity of projects in GEF's biodiversity portfolio seeks to produce different types of outcomes. A recent portfolio review concluded that the GEF, in operationalizing its biodiversity program strategy, has pursued four principal types of project outcomes that contribute to its goal of helping to achieve the objectives of the CBD. These four outcomes are:

1) Establishing and extending protected areas and improving their management

2) Conserving biodiversity and ensuring sustainable use of its components in the production environment (landscapes and seascapes)

3) Improving the enabling environment at global, regional and national levels

4) Facilitating fair and equitable sharing of the benefits arising from the use of genetic resources (as defined under the CBD).

The following section explores ways in which the impact of the GEF in promoting the four principal types of outcomes will be measured in terms of outcomes at the project level and at the aggregate program level.

5. Measuring Results and Impacts

Three approaches to measure results of the GEF biodiversity program have been selected: coverage, impacts, and the wider global context in which the first two exist and are reported.[3]

Coverage

Coverage is a reflection of what the GEF is doing and where: area over which the intervention is done. Within a traditional pressure-state-response framework, indicators that describe coverage are measures of response. They are a measure of GEF efforts or activities. Important aspects of this are the kinds of activities being undertaken and the areas where these activities are intended to influence biodiversity. The latter can be expressed in geographical terms. A pertinent question is whether the GEF is working in the right places to have maximum impact on biodiversity with its limited resources. These indicators are all quantitative in nature, expressed in cumulative numbers of projects and protected areas (as well as hectares) and their change overtime. While they do not address the quality of the interventions, they can be used to evaluate how GEF's activities relate to global priorities in biodiversity conservation.[4] The expression of program-level coverage indicators is based on aggregating information from individual projects.

Impacts

It is of fundamental importance when measuring the impact of the GEF biodiversity program that the outcomes of interventions are assessed along with coverage. In addition, given the magnitude of GEF activities, GEF's impact should be measured beyond just the sum of its individual project outcomes or impacts. Each project will have indirect or collateral impacts, and the program itself will also generate such impacts. These are difficult to quantify, but may be usefully illustrated according to types and examples and evaluated using narrative approaches, through case studies evaluations, for example. A few examples of indirect or **collateral impacts** of GEF's activities include:

- *Political influence:* Contributing to an enhanced political profile for biodiversity and the CBD;

- *Higher profile* of biodiversity concerns;

- *Enhancement of information and access to it:* Generating and disseminating new data on biodiversity and its status that contributes to the global and regional information base

- *Replication*: Promoting the adoption of successful GEF approaches in other locations and projects

- *Catalytic effects*: Generating other positive steps, catalyzing state legislation that is outside the project's objectives

- *Financial leverage*: Prompting the availability of new and additional resources and co-financing, but possibly causing a negative diversion of funds, as suggested by some NGOs (Further analysis is needed to explore this and identify solutions.)

- *Synergy*: Fostering positive synergies across conventions and focal areas.

---

[3]   These three levels are also related to the traditional pressure-state-response framework for indicators.

[4]   World Heritage Sites, Ramsar sites, Biosphere Reserves, WWF-US Global 200 ecoregions, Vavilov Centers, Endemic Bird Areas, Centres of Plant Diversity, WCMC's Global River Basin Analysis, Ecofloristic zone analysis, Large Marine Ecosystems, IUCN Red Lists of Threatened animals, plants and trees, CITES species.

- *Empowerment:* Boosting the stature and power of focal points and ministries through finance, information, and projects (not only in terms of resources, but a "place at the table")

Context Indicators

Global context indicators are a component of state in pressure-state-response response frameworks and are those used by the world at large to track general trends in biodiversity and related issues. They provide a backdrop or baseline against which the results of GEF efforts can be measured. In general terms, these context indicators should not be used to measure **directly** the accomplishments of the GEF given that it is only one party in the fight against biodiversity loss and degradation but as a way to calibrate GEF impacts.

Attributability

Because changes in human behavior are used as proxy measures for changes in biodiversity, the impact of the GEF biodiversity program must be assessed by determining its contribution to those changes in behavior. This involves attempting to establish a causal link between a GEF intervention and a given change in behavior. This may be relatively straightforward to establish in some cases but not so in others. The question of attribution is independent of the issue of the relationship between a given change in behavior and a change in biodiversity. That is, a particular change in behavior may be easily attributable but have little demonstrable or direct impacts on the state of biodiversity (for example, an increase in a country's taxonomic capacity as a result of GEF funding), while another change may be difficult to attribute but have a demonstrable, direct impact on biodiversity.

Many of the indicators proposed in the next few pages are expressed in terms of outcomes from GEF projects and/ or changes in a country since the onset of GEF support. The difference between these two is an estimate of some of the collateral impacts of GEF's activities, especially the catalytic and replication effects. On the other hand, it is possible that GEF's presence may have negative impacts, for example, by reducing the perceived need for funding to support biodiversity conservation. Therefore, the indicators proposed incorporate these to the extent that they involve net changes, but they are not designed for the specific detection of possible negative collateral effects.

6. Menu of Indicators

The methodology presented here provides a menu of indicators that responds to the logical framework outlined in Table 2, developed in relation to the four groups of outcomes identified for the biodiversity program. For each group, indicators of coverage, impact, and context are identified, along with special considerations and proposals for further development of new indicators. Individual projects and their outputs may contribute to many different indicators, and indeed, to more than one outcome grouping. Finally, trends of the proposed indicators over time are proposed as the way to monitor and measure impacts.

Proposed Indicators for Outcome 1: establishing and extending protected areas and improving their management

The GEF's work on protected areas focuses on establishing new protected areas, expanding existing ones, and increasing the effectiveness of their management. Evaluating GEF's impact on the protection of ecosystems and species should include not just the extent of protected areas where GEF has worked or had an impact, but the areas' management goals (i.e., IUCN categories), effectiveness in achieving these goals, and potential contributions to conservation of biodiversity and its components. The indicators proposed in Table 3.1 reflect the various aspects of the effectiveness of protected areas in contributing to the conservation of biodiversity.

Coverage Indicators

The three coverage indicators selected focus on the numbers, area, management categories, and distribution relative to global priorities of protected areas supported by GEF projects. Measuring change in the number and extent of protected areas requires periodic review and inquiry using input from GEF projects, in addition to consulting the global databases on protected areas maintained by UNEP-WCMC, for example. The overall indicator will rise slowly because the gazetting process is slow. It may be possible to show more progress using intermediate milestones in the protected area creation process such as "newly proposed" or "in preparation". Protected areas are "newly proposed" when a recommendation for a site to receive formal protection has become officially sanctioned or adopted by a relevant government body (for example, a national parks administration), which may adopt a pre-existing recommendation or prepare a new proposal of its own. Those "in preparation" have been subjected to further analysis of the officially sanctioned proposal, including participation by a legislative body and/or other identified stakeholders.

The global goal of conservation can be addressed through global or international priorities. Therefore, the GEF should evaluate both its portfolio and its impacts against available sets of international priorities. These include geographic priority sets based on species occurrence; ecosystem types and characteristics; site-based priorities, especially those associated with international conventions and processes; and priority species, generally those that are endemic and/or threatened. A few of the examples included are: World Heritage Sites, Ramsar sites, Biosphere Reserves, WWF-US Global 200 ecoregions, Vavilov Centers, Endemic Bird Areas, Centres of Plant Diversity, WCMC's Global River Basin Analysis, Ecofloristic zone analysis, Large Marine Ecosystems, IUCN Red Lists of Threatened animals, plants and trees, CITES species.

Impact Indicators

Statistics on both numbers of areas and total area protected are helpful, but expressing data according to categories of management goals provides more information on potential biodiversity impacts. While

countries differ as to the management priorities for different types of protected area, the IUCN management categories provide a widely accepted approach to classifying protected areas according to their main management goals. Changes in the protected areas management categories due to financial support from the GEF is proposed to be used as one of the indicators of impact.

The effectiveness of protected areas in contributing to the conservation of biodiversity depends in part on how well they achieve their management goals, that is, their management effectiveness. Significant progress has been made in developing frameworks to define and methods to evaluate management effectiveness (Hockings et al. 2000). As a means of providing a more standardized application of these frameworks, the World Bank/WWF Alliance has developed a tracking tool[5] (World Bank/WWF Alliance for Forest Conservation and Sustainable Use) based on a scorecard approach to evaluating effectiveness that uses several standard criteria and guidelines (see http://www.forest-alliance.org for further information). This system, which is being implemented by many task managers in the World Bank in collaboration with protected areas staff involved in World Bank projects, shows great promise as a method that could chart changes in management effectiveness brought about by GEF funding. Therefore, it is proposed here to adopt this scorecard approach to all GEF-supported projects that work within protected areas.

Context Indicators

The context indicators go beyond the scope of the projects themselves to address general trends in protected areas in GEF-supported countries. Context for the indicators of the impact and coverage of GEF projects can be provided principally in terms of the numbers, extent, and management categories of protected areas in GEF-recipient countries and globally. Examining this information periodically will help to track the general trends within which the GEF is exerting additional influence. The necessary data can be obtained from the databases maintained by UNEP-WCMC, for example. Context data on management effectiveness are unlikely to be available in the near future, though it is possible that some components of the scorecard would be suitable for expressing in this way.

Proposed Indicator: Conservation Quality Index

The other major determinant of how protected areas contribute to conserving biodiversity is the degree to which they address conservation priorities in terms of species ecosystems or locations. Priority setting can be done in several ways, and generally is driven by national conditions, values, and goals. However, the assessment of GEF's program-level impacts can only be achieved effectively if some means is found of evaluating the degree to which protected areas in different countries address conservation priorities. One way of doing this would be a scorecard approach, where individual protected areas, or entire protected area systems, would be evaluated qualitatively against national priorities. These might include particular species or ecosystems as determined by assessments of national or global conservation status, or locations determined by such factors as their role in ensuring habitat connectivity. Ultimately, it might be appropriate to develop a "Conservation Quality Index" using scorecard approaches to evaluate the contribution of GEF efforts to achieving representative conservation of priority ecosystems and species within national protected areas systems.

Proposed Indicators for Outcome 2: conserving and ensuring sustainable use of biological resources in the production environment (landscapes and seascapes)

GEF's support in this area may include activities to reduce the impact of logging in timber production, introducing agroforestry systems or the use of multiple landraces. Other projects are developing and implementing harvest regimes to ensure sustained production of wild fish or other species. The proposed indicators for this outcome are presented in Table 3.2.

Coverage Indicators

Two main coverage indicators are proposed to describe GEF activities in this area. The first deals with the number of projects and hectares included in projects addressing biodiversity in the production environment. The other one includes the number of projects addressing conservation or sustainable use of wild species.

---

[5]   See Annex I for a copy of this paper.

Table 3.1. Proposed GEF Program Indicators for Outcome 1: Establishing and extending protected areas and improving their management

Indicators	Assumptions and risks
Coverage Number of projects addressing protected areas, and number and hectares of protected areas (new and established) supported by GEF projects Number of projects addressing protected areas, and number and hectares of protected areas under a particular IUCN management category (or national equivalent) Number of projects addressing protected areas, and number and hectares of protected areas under any "global priority lists" (i.e., World Heritage sites, Ramsar, MAB, hotspots)	Increasing the amount of area under protection is an effective means of reducing ecosystem loss, degradation, and species loss. Higher IUCN management categories represent a more effective means of protection, and reduction in ecosystem loss, degradation, and species loss.
Impact Improvements in management effectiveness of protected areas receiving GEF support according to WWF/WB scorecards measured at three times during project implementation: initial (baseline), mid-life, and final stage of project Change in number and hectares of protected areas by IUCN management category resulting from GEF interventions	Management effectiveness scorecard results (based on IUCN-developed measures) reflect the effectiveness of ecosystem and species conservation afforded by a protected area and can be obtained in a consistent manner over time. Higher IUCN management categories represent a more effective means of protection, and reduction in ecosystem loss, degradation, and species loss.
Context Changes in the total number and hectares of protected areas in GEF recipient countries Changes to extent of protected areas by IUCN management category in GEF recipient countries	
Proposed Indicator (to be developed): <u>Conservation Quality Index</u> - aggregate or scorecard index to address the degree to which impacts reflect priorities	

Impact Indicators

Documenting the impact of GEF efforts in the production environment is more complex. Definitions of sustainability vary wildly and the verification of sustainable production is still under discussion within the biodiversity community.

The most straightforward measure of sustainable use could be accomplished by using existing systems of verifying sustainable production, which are normally termed certification systems. There are three main types: organic certification; fair-trade certification, and mixed "stewardship" systems, the last of which is chiefly for fisheries and natural and plantation forest ecosystems. Existing systems generally have the advantages of already having been negotiated and agreed on by a range of stakeholders, and having

other bodies that are responsible for monitoring. Their use thus imposes much less of a monitoring and assessment burden on the GEF. They do, however, have a number of disadvantages. Many are not primarily concerned with delivering biodiversity benefits and indeed may only be marginally concerned with biodiversity. This applies particularly to fair-trade certification, where social equity is the major concern. Further, certification is largely consumer-driven and is generally only relevant in the production of goods for sophisticated consumer markets, almost all in developed countries. It has little relevance for subsistence-level production or that aimed at local (national) markets in developing countries. Most internationally recognized certification systems are also relatively demanding, both in terms of the conditions the production system must meet and the effort required by the certification process itself.

Because these demands are well beyond the capacity of many producers in developing countries, changes in the area and proportion of certified production may be expected to be very slow for the immediate future, and may not reflect progress that is in fact taking place. Several certification systems recognize this and have established monitoring of production that is in transition to full certification.

Alternatively, and especially where certification systems are not considered appropriate, it will be necessary to develop and implement a new system for assessing sustainability in production systems where the GEF is working. A scorecard system to provide a *sustainable management effectiveness* tool for assessing trend towards more effective management, analogous to that used for assessing management effectiveness in protected areas is likely to be the best approach, but making such a system operational is not a trivial undertaking. A scorecard system would need to involve both universal elements, such as the existence and implementation of management plans, and elements relevant to the particular production landscape or seascape. Thus, for example, assessment of rangelands should take into account fire regimes and soil degradation. Those covering pastures and croplands should take into account chemical inputs (pesticides, herbicides, fungicides, and fertilizers); retention of wildlife habitats in field margins, hedgerows, and other small habitat patches such as ponds and copses; and irrigation regimes.

While this scorecard is being developed, a simpler but effective set of indicators is proposed based on whether an area has a *sustainable management plan* (see Table 3.2). In particular, each project will report at what stage its sustainable management is, for example: under preparation, drafted, completed, approved by government, under implementation, with an M&E plan in place, and finally verified. The program-level impact indicators will be the aggregated number of hectares or areas supported by the GEF under each of these stages in the evolution of a sustainable management plan and the changes over time. An important consideration is that the plan (either drafted or under implementation) should reflect biodiversity considerations as verified by an independent consultant. These consultants could be part of the regular team of experts participating in reviewing project implementation, such as during project preparation, at mid-term, or on completion.

Another potential impact indicator could be whether an area has an *integrated zoning plan*. In many cases, large segments of the production environment are included in integrated zoning plans, which address the management of often-large, multiple-use areas and may include terrestrial, inland water, and in-shore marine areas in their scope. The mere existence of such a plan is an indication that some attention has been paid to landscape-level management issues, and biodiversity considerations are often, but not always included. Biosphere Reserves are an internationally recognized set of areas that are zoned for multiple use and whose management should incorporate biodiversity considerations; assessment of GEF support for these areas could provide a useful though partial indicator of GEF's impact in this respect.

Another proposed indicator includes the membership and enforcement of the Convention on International Trade in Endangered Species (CITES) within a country. Because CITES only regulates international trade in a relatively limited number of species (those included in its appendices), it is an imperfect indicator of sustainable use of wild species, but it is, nevertheless, useful. Proper enforcement of CITES should involve demonstrating that the harvest of exported species is sustainable. Evidence that this is being done is a good indicator that efforts are being made to control harvests of wild species in general.

Proposed Indicator: Production Quality Index

The other major determinant of how the production environment contributes to conserving biodiversity is the degree to which it addresses conservation priorities in terms of species ecosystems or locations. Priorities can be set in several ways and are generally driven by national conditions, values, and goals. However, GEF's program-level impacts can only be evaluated effectively if there is a means of evaluating the degree to which the area under production addresses conservation priorities. One means of evaluation would be a scorecard approach, in which individual production environment areas, or entire areas, are evaluated qualitatively against national priorities. These might include particular species or ecosystems as determined by assessments of national or global conservation status, or locations determined by such factors as their role in ensuring habitat connectivity. Ultimately, a "*Production Quality Index*" developed using scorecard approaches might be appropriate

for evaluating GEF's contribution to achieving representative conservation of priority ecosystems and species within the production environment.

Context Indicators

Evaluation of general trends in progress towards sustainable management will provide useful context for examining indicators of GEF impacts. At present, the most effective context indicator to evaluate is the change in area under verified sustainable management, where "verified" is taken to mean "certified." Data can be obtained from the certification umbrella bodies such as the Forest Stewardship Council, the Marine Stewardship Council, and the Soil Association. Experience has shown that assembling trend data even for these formal certification programs can be an arduous task, especially where the extraction of subsets, such as GEF-recipient countries from an overall global trend, is desired. Of the existing certification initiatives, only those addressing organic agriculture formally identify areas in transition towards certification. Assembling data on integrated zoning plans will be a still more arduous task that will require tackling through national planning and land management authorities. Spatial data on both areas of importance for agricultural biodiversity and areas under particular management regimes may be necessary to evaluate the degree to which areas of importance are under, or in transition to, sustainable management. The CITES Secretariat and CITES national reporting can provide data for the context indicator on CITES membership and enforcement.

Table 3.2. Proposed GEF Program Indicators for Outcome 2: Conserving and ensuring sustainable use of biological resources in the production environment (landscapes and seascapes)

Indicators	Assumptions and risks
Coverage Number of projects addressing the production environment and number and hectares dealing with biodiversity in the production environment (i.e., landscape, seascape) Number of projects addressing conservation and/or sustainable use of wild species	Promoting conservation and sustainable use of biodiversity in the production environment can help halt the loss and degradation of biodiversity overall.
Impact Change in the areas (i.e., hectares) of production environment (or proportion of) receiving GEF funding: 　- Under verified sustainable management (i.e., the area under GEF support has a sustainable use plan under implementation and a monitoring and evaluation system) 　- In transition towards verified sustainable management (e.g., the area under GEF support has a sustainable management plan but is not under implementation) 　- With integrated zoning plans that adequately reflect biodiversity considerations Change in area of importance for agricultural biodiversity under or in transition to verified sustainable management systems in areas subject to GEF interventions Number of countries that have joined CITES or improved enforcement of CITES with GEF support	Existing verification systems cover all production systems in which GEF works, such as croplands, production forests, rangelands and pasture, inland and marine fisheries areas. Implementation, monitoring, and evaluation of sustainable use management plans for biological resources are necessary for certifying a production environment. Zoning plans are implemented and deliver biodiversity benefits. Enforcement of CITES ensures the sustainable use of the species concerned.
Context: Changes since the onset of GEF support in the areas of production environment (at the national or aggregate level within GEF recipient countries): 　- Under verified sustainable management 　- In transition towards verified sustainable management 　- With integrated zoning plans that adequately reflect biodiversity considerations 　- Of importance for agricultural biodiversity under or in transition to verified sustainable management systems. Number of GEF recipient countries that have joined CITES or improved enforcement of CITES within the study period.	
Proposed Indicators - Production Quality Index - degree to which the production environment is addressing conservation priorities. - A scorecard system to provide a *sustainable management effectiveness* tool for assessing trend towards more effective management, analogous to that used for assessing management effectiveness in protected areas is likely to be the best approach, but making such a system operational is not a trivial undertaking.	

Proposed Indicators for Outcome 3: Improving the enabling environment

Most GEF-supported projects include components that aim to improve the enabling environment for conservation and sustainable use of biodiversity at the national level. It is widely recognized that a number of underlying factors such as policy, information, capacity, and finance often play major roles in limiting progress towards halting biodiversity loss and degradation. Furthermore, many GEF activities directly address the global or international enabling environment, including international policy, international development and exchange of information, and research.

The GEF attaches great importance to improving the enabling environment for meeting its global objectives. The term "enabling environment," in the context of biodiversity, encompasses those aspects of political, economic, and social conditions that facilitate the conservation, sustainable use, and equitable sharing of benefits of biological diversity. Relevant aspects of the enabling environment include:

- Developing and reforming biodiversity policies and regulations

- Addressing biodiversity issues in the policies of other sectors that may affect biodiversity

- Achieving international cooperation in protecting and managing key biodiversity resources affected by more than one nation

- Developing and implementing fiscal (and other) incentives to promote conservation of biodiversity and eliminate perverse incentives

- Leveraging additional resources from national and other international sources

- Promoting research relevant to the conservation and sustainable use of biodiversity

- Raising public awareness of the importance of biological diversity and its conservation, through education and dissemination in the media

- Building individual, institutional, and systemic capacity to conserve biodiversity and use its components sustainably

- Enhancing mechanisms for stakeholder involvement in developing and implementing activities to help conserve biodiversity, use its components sustainably, and equitably share the benefits arising from the use of genetic resources

- Improving governance regimes.

Coverage Indicators

The coverage indicators listed in Table 3.3a can help quantify GEF's efforts to improve the enabling environments as outlined above. Because they reflect the intended functions of GEF projects, the data necessary to produce the indicators should be included as a matter of course in project documents and reports. Therefore, their analysis should be relatively straightforward; the results can usefully be summarized according to the sectors or ecosystems most affected, as well as by country or geographical region.

Impact Indicators

Assessing GEF's impact on the enabling environment for conservation and sustainable use of biodiversity should be completed keeping in mind several assumptions. First, measuring changes in the enabling environment and aggregating these to the program level are difficult to quantify, and the variable institutional and governance regimes in place in the countries where GEF operates make it hard to establish standards against which to measure changes. Second, attributing changes to particular actors such as the GEF is not straightforward, particularly at the national level or higher. Comparing the enabling environment in countries where GEF has supported enabling activities with those where it has not may provide one basis for identifying impacts attributable to the GEF, and historical analysis—that is, comparing conditions before GEF support—may be a still better way. Third, the connections between changes in the enabling environment and the achievement of GEF's global objectives, as set out in Table 1, are often tenuous and indirect at best. Finally, changes to the enabling environment such as policy reform may not be effected until well after a project's end and therefore may not be well documented. For these reasons, many of GEF's impacts on the enabling environment may be captured best through non-indicator approaches, such as narratives and case studies complementary to the present report on indicators.

Assessing national policy and regulatory regimes as they impinge on biodiversity and establishing comparable cross-country standards is problematic. Individual projects may report impacts in changing particular sectoral policies, but public policy changes generally cannot be completed within the normal lifetime of a project. Defining intermediate steps in the policy change process (in an analogous fashion to that suggested for establishing protected area or sustainable management plans) could provide a way of tracking impact within project lifetimes.

The GEF supports training and capacity building programs directly, and it is important that enabling environment indicators capture these impacts. The impacts of capacity development should also include the extent to which such skills continue to generate biodiversity benefits outside GEF projects.

One important indicator is the existence of interministerial arrangements to assess capacity needs. GEF's role in establishing such arrangements can be assessed directly. Another indicator, the timeliness of submission of national reports to the CBD, reflects both national capacity and commitment to meeting the Convention objectives.

As an important indicator both of institutional and systemic capacity and of civil society's engagement in biodiversity issues, NGO activity serves as a useful surrogate indicator for the relative degree of stakeholder involvement in these issues. Important variables are the number of NGOs, their size, and how active each is. These are all influenced by a wide range of external factors, of which national governance regimes and the relative size of the middle class are probably the two most important. Assessing trends in the number of NGOs involved in GEF projects may be a more direct measure of GEF influence in this area.

Evaluating the effectiveness of financial arrangements established under GEF projects also requires going beyond the normal project life cycle and therefore requires separate, dedicated evaluation studies.

Context Indicators

The context for GEF's impacts on the enabling environment includes overall trends in its various components. Many of these can be assembled from the information supplied in national reports

to the Convention on Biological Diversity. This is particularly true of policies and action plans, which form an explicit part of CBD reporting. Useful context data on capacity at the individual and institutional levels can be obtained from, for example, national databases listing individuals with expertise in biodiversity, as already exist in some countries, such as Tanzania, or in specialist global databases, such as the World Taxonomists Database.

Global and International Level

A number of GEF activities directly address the *global* or international enabling environment, and their impact cannot be captured using aggregation of national level data. Such impacts could include for example the improvement in global understanding of the management of biodiversity through the targeted research program and the raising of the profile of the CBD in the international policy arena. Their measurement (Table 3.3b) is closely connected to the measurement of context indicators for these areas, and indeed the role of the GEF can only be distinguished in some cases.

There are several programs that promote the international exchange of information relevant to biodiversity. These include biodiversity networks and those in related sectors. In some cases, such as the Inter-American Biodiversity Information Network (IABIN) and the Regional Environment and Information Management Project (REIMP) in Central Africa, the GEF has supported the development of these networks directly. In other cases, GEF-supported activities have contributed indirectly to their improved functioning, for example, through the generation of additional data and information. The number of such networks supported directly could be a crude indicator of GEF impact on this aspect of the international enabling environment.

The GEF has also supported or contributed to international biodiversity assessments both as outputs in themselves or as contributions to strategic planning processes. The information generated by these assessments can be a major contribution to the enabling environment for conservation and sustainable use of biological diversity. Tracking the international assessments supported by the GEF therefore provides an indicator of its impact on the international enabling environment.

A major contribution from GEF projects to the international information base is through publications in the scientific literature. While this is particularly true for targeted research projects, many different GEF-supported initiatives generate publications in the refereed literature. As these should be mentioned as part of routine project reporting, they and their impact (the factor used to measure audience and use of particular journals) can be monitored over time. There is some danger that publications are inadequately reported and/or that they occur outside the project time frames and therefore the indicator would under-represent the GEF's achievements in this respect.

Table 3.3a. Proposed GEF Program Indicators for Outcome 3: Improving enabling environment (through action at national and local levels).

Indicators	Assumptions and risks
Coverage Number of projects that include among their objectives reform of sectoral policies, laws, and regulations to reflect biodiveristy considerations. Number of projects aiming to develop capacity to manage biological resources at any of the three levels (individual, institutional, systemic) Number of projects aiming to enhance public awareness and/or formal education about biodiversty. Number of projects addressing financial arrangements for conservation and sustainable use of biological resources. Number of NBSAPs supported by GEF.	Capacity will be retained and used within the sector (no "brain drain"). Institutions are the critical link between individual and systemic level capacity; they are strengthened if they have the capacity to interact within the decision-making process of other institutions Inclusion of financial arrangements increases long-term sustainability of biodiversity conservation activities. The mere preparation of NBSAPs has forced a national debate on biodiversity issues.
Impact Changes in sectoral policies, laws and regulations to reflect biodiversity considerations (i.e. number of relevant sectoral policies, laws and regulations that have moved along the pathway from drafting to enforcement with GEF support). Number of NGOs implementing GEF projects Number of countries with inter-minsterial arrangements to assess capacity needs. Timeliness of submission of national reports to CBD by GEF supported countries. Leveraging of national funding for biodiversity (i.e. changes over time of national sources co-financing in GEF projects).	Explicit reference to biodiversity in sectoral policies may or may not imply action; actual impact of policies and measurement of effectiveness may take longer than the life of the project Increased timeliness represents improvements in capacity and engagement with the CBD process National co-financing represents increased commitment to biodiversity on the part of the government and other national actors. Measuring changes in the enabling environment and aggregating these to program level is not straightforward.
Context Number of countries with national laws or policies on conservation and sustainable use of natural resources/biological resources Change in national investment in biodiversity-related activities since the onset of GEF-supported activities within the country Number of NBSAPs prepared in GEF recipient countries (supported or not by GEF) Numbers of individuals with biodiversity expertise listed in national and global databases.	

Table 3.3b. Proposed GEF Program Indicators for Outcome 3: Improving the enabling environment (through action at international levels)

Indicators	Assumptions and risks
Changes to international policy and trade regimes that make them more supportive of the objectives of the CBD (impact where GEF influence can be identified)	Changes in international regimes will lead to actions that improve the status of biodiversity
Change in number of international information exchange systems relevant to biodiversity since entry into force of CBD (and change in those supported by GEF)	International information exchange mechanisms will be used to enhance management of biodiversity
Number of international biodiversity assessments undertaken since entry into force of the CBD (and number supported by GEF)	International biodiversity assessments will be used to enhance management of biodiversity
Number and impact of publications in refereed scientific literature concerning biodiversity and its management resulting from initiatives that have received GEF support.	Impact in the scientific community has an impact on management of biodiversity

Proposed Indicators for Outcome 4: Facilitate fair and equitable sharing of the benefits arising from the use of genetic resources

As with protected areas and conservation and sustainable use in the production environment, the development of policy, legislative, and institutional regulatory frameworks for benefit-sharing are part of GEF's contribution to improving the enabling environment. Concluding specific agreements for sharing genetic resources, however, forms an explicit part of this group of outcomes in the same way that gazetting a protected area is part of Outcome 1. As with protected areas, such agreements only take on real importance when they become operational, that is, when concrete benefits are actually transferred.

The GEF's activities relating to equitable benefit sharing are still in the early stages of development as reflected by the ongoing discussions at the CBD COPs. Many activities are directed at modifying the enabling environment for development of benefit-sharing mechanisms, and include building institutional and systemic capacity and improving mechanisms for consultation and involvement of stakeholders. The implementation of agreements and related measures

will likely form the basis for future project work. Work in this area relates most directly to cell 9 of Table 1.

Because activities in this area are only just beginning and the CBD is still discussing these issues, there may not be yet impacts to report. Therefore, monitoring efforts could initially be focused on evaluating coverage (Table 3.4) by tracking the number of projects addressing benefit sharing that arise out of genetic resources as defined by CBD. Benefit-sharing activities that could be used for assessing this indicator include: scientific research and development of, commercialization of, and access to genetic resources for environmentally sound uses; the transfer of relevant technology; and biotechnology.

When they occur, project and program impacts will take the form of agreements concluded with GEF support and the transfer of benefits under those agreements, most likely in monetary form. Both of these should be relatively easy to monitor from project reports. Ultimately national reports to the CBD may be good sources of data to provide appropriate context indicators (Table 3.4). In any case, this type of indicator will require further analysis and research.

Table 3.4. Proposed GEF Program Indicators for Outcome Group 4: Facilitating fair and equitable sharing of the benefits arising from the use of genetic resources

Indicators	Assumptions and risks
<u>Coverage</u> Number of projects addressing the sharing of benefits arising out of genetic resources as defined by CBD **<u>Impact</u>** - Number of agreements on access and benefit sharing concluded with GEF support - Dollar value of benefits transferred under agreements on access and benefit sharing concluded with GEF support	Access and benefit sharing (ABS) agreements and their implementation actually improve fairness of benefit sharing. Any benefits transferred are equitably distributed
<u>Context</u> Number of agreements on access and benefit sharing concluded by countries since the onset of GEF support Dollar value of benefits transferred under agreements on access and benefit sharing concluded involving at least one country with GEF support since onset of support	

7. Strategies for Generating and Expressing Indicators

Data requirements and acquisition

Each of the proposed indicators described above has specific data requirements. To generate the indicators, these data will have to be acquired and maintained in a suitable form. Monitoring GEF's activities and impacts over time requires information on individual projects' accomplishments, aims, and outcomes through:

- *Baseline data* that show the situation when GEF-funded activities begin and are used as a reference, point to help document impacts.

- *Reference data* that put individual projects' outcomes and impacts in context, including for example, geographic distribution of priority areas for biodiversity and lists of threatened species.

- *Implementation or project lifetime data* that include specific variables related to the indicators presented in this document provided by the project staff during a project's implementation, especially at mid-point and completion

- *Post-completion project impacts* begin after GEF support has ended. For the GEF biodiversity program to meet its objectives, it is imperative that its impacts are sustainable. But many impacts and outcomes require longer than the normal project cycle to take effect. These impacts will be evaluated through the development of case studies, rather than systematic data collection.

- *Context data* are necessary for the generation of context indicators extracted from several sources. These global data are the ultimate indicator of progress with respect to the overall goal of the CBD and of components 1 and 3 of Table 1.

The relative importance of these data types differs among coverage, impact, and context indicators, with reference data being fundamental to coverage indicators as well as to context indicators, while baselines, project implementation and post-completion project impact data are especially important for impact indicators. For each indicator category, however, there are two general kinds of data: those that can be generated from project reporting, either as it is currently carried out or in modified form, and those that are beyond the responsibility of individual projects with a finite lifespan to collect and report. Different strategies for gathering the data are required in each case.

Data for coverage and impacts indicators during the project lifetime

Some of the data needed for coverage and impact indicators comes from project documents and M&E reports. Project documentation and reporting can be revised to address more of the data requirements for program-level monitoring and evaluation, although it is impossible to anticipate all possible needs within the reporting requirements. In fact, the priority lists and targets against which the GEF may choose to evaluate its program are constantly evolving, as is wider biological knowledge about distribution and status of species.

At all times, efforts should be made to minimize additional reporting burdens on project executants, while assuring a maximum availability of relevant information.

Baselines

All quantitative assessments of impact or change require a baseline or reference point. It is important to define these as clearly and as early as possible in any given project cycle. However, gathering data on baselines is itself often an onerous undertaking and may place heavy burdens on project executants in the early stages of a project cycle, when capacity is still limited. In some cases, it may be possible to retrofit baselines once monitoring systems are put in place. In addition,

an integral part of project preparation, for example, in PDFAs and PDFBs[6], should be establishing baselines of reasonably readily available existing knowledge. This should include identifying important gaps in knowledge and developing strategies for filling these gaps during the implementation of the project.

Reference data

Global reference data are a vital component of any assessment of GEF's biodiversity program. These data include, for example, the location of global and regional biodiversity hotspots of various kinds, datasets of protected area boundaries, and lists of globally threatened and economically important wild species.

Appropriate time frames and post-completion project impacts

Meaningful change in biodiversity, or in human behavior that has an impact on biodiversity, may often take longer than the normal project cycle to manifest itself. This presents a major problem for evaluating the impacts of GEF interventions, as once GEF support has ended, there will no longer be explicit requirements to report either to the GEF or the implementing agencies. In some cases, for example, the development and implementation of a protected area management plan, long-term monitoring is an aspect of best practice and establishing mechanisms for such monitoring should be integral to the management plan.

In cases where post-intervention monitoring does take place, there is still no guarantee that the results of the monitoring will be readily available to the GEF. Those responsible for such monitoring should be encouraged to place the results in the public domain whenever possible. In addition, project executants should be encouraged to flag likely post-project impacts in their final project reports. In both these cases, an onus remains on those assessing the GEF biodiversity program to seek out and collate such data. In the shorter term, it is proposed that a case-study approach be used to assess post-intervention impacts.

Context data

Data that are necessary for the generation of context indicators will come from a range of sources. Many of those relating to policy and other aspects of the enabling environment can be compiled by analyzing national reports to the CBD and other multilateral environmental agreements. Others, especially those on protected areas, can be extracted from existing international databases as long as these are properly maintained. Those relating to sustainable management and use of biodiversity are likely to prove the most problematic and could require specific targeted studies.

Of additional importance in establishing the context for GEF's actions and impacts with respect to biodiversity are global data on status and trends in biodiversity. These may include data on ecosystem extent, such as those provided by the FAO for forests, and on species status, such as those provided by periodic global Red List revisions. These global data are the ultimate indicators of progress with respect to the overall goals of the CBD and of components 1 and 3 of Table 1.

Other topics not addressed in the proposed methodology

The framework and indicators presented in this document are not sufficient to address the full range of possible questions about GEF impacts on biodiversity. In particular, many changes in the enabling environment, such as policy changes, increasing stakeholder involvement, and alterations in institutional capacity are not directly amenable to quantitative analysis with the tools and reporting approaches currently available and proposed here. Both detailed case studies and new analytical tools are needed. Furthermore, the connections between changes in the enabling environment and changes in biodiversity status require further in-depth investigation.

The indicators are likely to be only partially effective in capturing the collateral impacts of projects. Special-purpose-designed studies are needed to elucidate these, as well as to build a portfolio of case studies. Similar approaches are needed to facilitate lesson-learning among projects; quantitative reporting does not provide enough information about which approaches are most successful under what circumstances.

The indicators proposed here also do not address GEF's impact on the root causes of biodiversity loss, such as climate change or socioeconomic activities. Special studies on the impacts and interactions between GEF focal areas may be advisable in this respect.

---

[6]   Small grants provided by GEF to support project preparation.

8. Implementation of Proposed Framework

The first step of measuring GEF program-level impacts on biodiversity is to operationalize as many indicators as possible. This should be done in a semi-structured, dynamic, and adaptive way rather than prescriptive way. The GEF M&E Unit and the Biodiversity Indicators Steering Committee should take a central role in developing operational guidelines for the proposed indicators as well as participating in the application of these guidelines and annual reporting of results. The upcoming review of the GEF Biodiversity Program (Biodiversity Program Study 2004) will be the best opportunity to apply the concepts and indicators proposed in this document. Setting indicators for the strategic priorities for the third replenishment of the GEF (2003-2005) will be another opportunity for applying the proposed framework.

Next Steps

The implementation of the methodology and indicators proposed in this document will require:

1. Preparing operational guidelines for collecting, analyzing, and reporting indicators including guidance on how the proposed indicators will be applied to the GEF Business Strategy for the third GEF replenishment.

2. Developing, discussing and agreeing on an information collection tool at the project level (Project Information Form for Biodiversity, PIFB)

3. Introducing the PIFB to all future GEF-financed biodiversity projects

4. Developing an annual report of indicators to Council (and publications)

5. Developing additional indicators, such as the Sustainable Use Scorecard (other proposed indicators will also need to be discussed)

6. Developing terms of reference for the next Biodiversity Program Study that include the application of proposed indicators and other case studies and evaluations.

Guidance to Biodiversity Steering Committee

The Biodiversity Steering Committee will guide the process described in the previous section. It should meet at least semi-annually to discuss progress and provide further guidance. There are two major steps that need to be tackled in the next few months: development of the PIFB and the Sustainable Use Index Scorecard. The membership of this committee should be expanded to include representatives of STAP and the scientific community at large.

Guidance to GEF Secretariat

The GEF Secretariat and GEF M&E Unit should take the lead in implementing the proposed methodology and framework for measuring results of the biodiversity program. In particular, the GEF Secretariat Biodiversity Team will:

• Prepare operational guidelines for implementing the proposed methodology, especially the development of the Project Information Form for Biodiversity (PIFB);

• Support the development and maintenance of key datasets on biodiversity and its management

The GEF Monitoring and Evaluation Unit will:

• Take the lead in and responsibility for analysis and

aggregation at the program level of data collected by implementing agencies at the project level (this task will include verifying the information provided in the PIFB)

- Prepare annual reports for the GEF Council on progress in measuring the results of the biodiversity program and targets established for the third replenishment of the GEF.

- Coordinate special evaluation studies to address issues that could not be addressed through the present methodology, such as a Production Quality Index, enabling environment linkages, post-completion project impacts, context indicators analysis (specially for sustainable management use), and interaction across GEF focal areas

- Support the development and maintenance of key datasets on biodiversity and its management.

Guidance to Implementing and Executing Agencies

In addition to participating in the Steering Committee, the responsibilities of the implementing agencies and executing agencies will include:

- Introduce the PIFB to project proponents and implementers, especially at project approval, mid-term and completion

- Take the lead in and responsibility for efficient application of the PIFB at the project level

- Prepare a report to the GEF M&E Unit that summarizes the information collected with the PIFB at the project level and highlights major points

- Share with the Steering Committee advances and developing methods for evaluating change, especially in less quantifiable parameters (for example, World Bank approaches on protected area management effectiveness and UNDP work on capacity).

Guidance to STAP

As with other M&E studies, STAP will be invited to participate in the further development of the methodology and new indicators. As the advisory scientific body of the GEF, STAP will be asked to call upon its roster of experts to provide technical advice in the ongoing discussion on indicators. For example, STAP could be asked to convene workshops of high-level experts in biodiversity to discuss further development of the sustainable management scorecards proposed in this document.

References

IUCN (1994). *Guidelines for Protected Area Management Categories*. CNPPA with the assistance of WCMC. IUCN, Gland, Switzerland and Cambridge, UK. x + 261pp.

Hocking, M., Stolton, S. and Dudley, N. (2000). *Evaluating Effectiveness: A Framework for Assessing the Management of Protected Areas*. IUCN, Gland, Switzerland and Cambridge, UK. x + 121pp.

WWF and World Bank (2003). *Reporting Progress in Protected Areas: A site-level management effectiveness tracking tool*. (World Bank/ WWF Alliance for Forest Conservation and Sustainable Use).

Annex 1. Reporting Progress in Protected Areas –
A Site-Level Management Effectiveness Tracking Tool

Contact Information:

Sue Stolton: equilibrium@compuserve.com
Marc Hockings: m.hockings@mailbox.uq.edu.au
Nigel Dudley: equilibrium@compuserve.com
Kathy MacKinnon: kmackinnion@worldbank.org
Tony Whitten: twhitten@worldbank.org

Contents

Acknowledgements

Background

There is a growing concern amongst protected area professionals that many protected areas around the world are not achieving the objectives for which they were established. One response to this concern has been an emphasis on the need to increase the effectiveness of protected area management, and to help this process a number of assessment tools have been developed to assess management practices. It is clear that the existence of a wide range of situations and needs require different methods of assessment. The World Commission on Protected Areas (WCPA) has therefore developed a 'framework' for assessment[7]. The WCPA framework aims both to provide some overall guidance in the development of assessment systems and to encourage standards for assessment and reporting.

The WCPA Framework is based on the idea that good protected area management follows a process that has six distinct stages, or elements:

- it begins with understanding the **context** of existing values and threats,

- progresses through **planning**, and

- allocation of resources (**inputs**), and

- as a result of management actions (**processes**),

- eventually produces products and services (**outputs**),

- that result in impacts or **outcomes**.

The World Bank/WWF Alliance for Forest Conservation and Sustainable Use ("the Alliance") was formed in April 1998, in response to the continued depletion of the world's forest biodiversity and of forest-based

goods and services essential for sustainable development. As part of its programme of work the Alliance has set a target relating to management effectiveness of protected areas: *50 million hectares of existing but highly threatened forest protected areas to be secured under effective management by the year 2005*[8]. To evaluate progress towards this target the Alliance has developed a simple site-level tracking tool to facilitate reporting on management effectiveness of protected areas within WWF and World Bank projects. The tracking tool has been built around the application of the WCPA Framework and Appendix II of the Framework document has provided its basic structure.

The Management Effectiveness Tracking Tool forms part of a series of management effectiveness assessment tools, which range from the *WWF Rapid Assessment and Prioritisation Methodology* used to identify key protected areas at threat within a protected area system to detailed monitoring systems such as those being developed by the *Enhancing Our Heritage* project for UNESCO natural World Heritage sites. The Alliance has also supported the development of both the WCPA framework and the development of the WWF Rapid Assessment and Prioritisation Methodology.

The WCPA Framework

To maximise the potential of protected areas, and to improve management processes, we need to understand the strengths and weaknesses of their management and the threats that they face. In the last few years, various methodologies for assessing management effectiveness of protected areas have been developed and tested around the world. The World Commission on Protected Areas provides an overarching framework for addressing management effectiveness of both protected areas and protected

---

7   Hockings, Marc with Sue Stolton and Nigel Dudley (2000); *Assessing Effectiveness – A Framework for Assessing Management Effectiveness of Protected Areas*; University of Cardiff and IUCN, Switzerland

8   Dudley, Nigel and Sue Stolton (1999); *Threats to Forest Protected Areas: Summary of a survey of 10 countries*; project carried out for the WWF/World Bank Alliance in association with the IUCN World Commission on Protected Areas, IUCN, Switzerland

area systems, to give guidance to managers and others to help harmonise assessment around the world.

Table 1 contains a very brief summary of the elements of the WCPA Framework and the criteria that can be assessed[9]. The Management Effectiveness Tracking Tool has been designed to fulfil the elements of evaluation included in the Framework.

Table 1: Summary of the WCPA Framework

Elements of evaluation	Explanation	Criteria that are assessed	Focus of evaluation
Context	*Where are we now?* Assessment of importance, threats and policy environment	- Significance - Threats - Vulnerability - National context - Partners	Status
Planning	*Where do we want to be?* Assessment of protected area design and planning	- Protected area legislation and policy - Protected area system design - Reserve design - Management planning	Appropriateness
Inputs	*What do we need?* Assessment of resources needed to carry out management	- Resourcing of agency - Resourcing of site	Resources
Processes	*How do we go about it?* Assessment of the way in which management is conducted	- Suitability of management processes	Efficiency and appropriateness
Outputs	*What were the results?* Assessment of the implementation of management programmes and actions; delivery of products and services	- Results of management actions - Services and products	Effectiveness
Outcomes	*What did we achieve?* Assessment of the outcomes and the extent to which they achieved objectives	- Impacts: effects of management in relation to objectives	Effectiveness and appropriateness

---

[9] For a copy of the WPCA Framework or a more detailed summary please visit the WCPA web-site at: www.iucn.org/themes/wcpa or contact WCPA at wcpa@hq.iucn.org

Purpose of the Management Effectiveness Tracking Tool

The Management Effectiveness Tracking Tool has been developed to help track and monitor progress in the achievement of the World Bank/WWF Alliance worldwide protected area management effectiveness target. It is also hoped that the tracking tool will be used more generally where it can help monitor progress towards improving management effectiveness; for example it is being used by the Global Environment Facility.

The Alliance has identified that the tracking tool needs to be:

- Capable of providing a harmonised reporting system for protected area assessment within both the World Bank and WWF;

- Suitable for replication;

- Able to supply consistent data to allow tracking of progress over time;

- Relatively quick and easy to complete by protected area staff, so as not to be reliant on high levels of funding or other resources;

- Capable of providing a "score" if required;

- Based around a system that provides four alternative text answers to each question, strengthening the scoring system;

- Easily understood by non-specialists; and

- Nested within existing reporting systems to avoid duplication of effort.

Limitations

The Management Effectiveness Tracking Tool is aimed to help ***reporting progress*** on management effectiveness and should not replace more thorough methods of assessment for the purposes of adaptive management. The tracking tool has been developed to provide a quick overview of progress in improving the effectiveness of management in individual protected areas, to be filled in by the protected area manager or other relevant site staff. As such it is clear that there are strict limitations on what it can achieve: it should not for example be regarded as an independent assessment, or as the sole basis for adaptive management.

Because of the great differences between expectations, resources and needs around the world, the tracking tool also has strict limitations in terms of allowing comparison between sites: the scoring system, if applied at all, will be most useful for tracking progress over time in one site or a closely related group of sites.

Lastly, the tracking tool is too limited to allow a detailed evaluation of *outcomes* and is really aimed at providing a quick overview of the management steps identified in the WCPA Framework up to and including *outputs*. Although we include some questions relating to outcomes, the limitations of these should be noted. Clearly, however good management is, if biodiversity continues to decline, the protected area objectives are not being met. Therefore the question on condition assessment has disproportionate importance in the overall tracking tool.

Guidance notes for using the Management Effectiveness Tracking Tool

The Management Effectiveness Tracking Tool can be completed by protected area staff or project staff, with input from other protected area staff. The tracking tool has been designed to be easily answered by those managing the protected area without any additional research.

All sections of the tracking tool should be completed. There are two sections:

1. **Datasheet:** which details key information on the site, its characteristics and management objectives and includes an overview of WWF/World Bank involvement.

2. **Assessment Form:** the assessment form includes three distinct sections, all of which should be completed.

   - Questions and scores: the main part of the assessment form is a series of 30 questions that can be answered by *assigning a simple score ranging between 0 (poor) to 3 (excellent).* A series of four alternative answers are provided against each question to help assessors to make judgements as to the level of score given. *Questions that are not relevant to a particular protected area should be omitted,* with a reason given in the comments section (for example questions about use and visitors will not be relevant to a protected area managed according to the IUCN protected area management Category Ia). In addition, there are six supplementary questions which elaborate on key themes in the previous questions and provide additional information and points. This is, inevitably, an approximate process and there will be situations in which none of the four alternative answers appear to fit conditions in the protected area very precisely. We suggest that you choose the answer that is nearest and use the comments section to elaborate.

   - Comments: a box next to each question allows for *qualitative judgements to be justified* by explaining why they were made (this could range from personal opinion, a reference document, monitoring results or external studies and assessments – the point being to give anyone reading the report an idea of why the assessment was made). In this section we also suggest that respondents comment on the role/influence of WWF or World Bank projects if appropriate. On some occasions suggestions are made about what might be covered in the comments column.

   - Next Steps: for each question respondents are asked to identify a long-term management need to further adaptive management at the site, if this is relevant.

3. **Final Score:** a final total of the score from completing the assessment form can be *calculated as a percentage of scores from those questions that were relevant to a particular protected area.* (So for example if 5 questions are believed to be irrelevant (and this is justified in the comments column) then the final score would be multiplied by 30/25 to offset the fact that some questions were not applied.) If the additional questions are relevant to the protected area, add the additional score to the total if they are relevant and omit them if they are not.

Disclaimer: The whole concept of "scoring" progress is fraught with difficulties and possibilities for distortion. The current system assumes, for example, that all the questions cover issues of equal weight, whereas this is not necessarily the case. Accuracy might be improved by weighting the various scores although this would provide additional challenges in deciding differing weightings. In the current version a simple scoring system is maintained, but the limitations of this approach should be recognised.

Reporting Progress in Protected Areas: Data Sheet

Name of protected area			
Location of protected area (country, ecoregion, and if possible map reference)			
Date of establishment (distinguish between agreed and gazetted*)	Agreed	Gazetted	
Ownership details (i.e. owner, tenure rights etc)			
Management Authority			
Size of protected area (ha)			
Number of staff	Permanent	Temporary	
Annual budget (US$)			
Designations (IUCN category, World Heritage, Ramsar etc)			
Reasons for designation			
Brief details of World Bank funded project or projects in PA			
Brief details of WWF funded project or projects in PA			
Brief details of other relevant projects in PA			
List the two primary protected area objectives			
Objective 1			
Objective 2			
List the top two most important threats to the PA (and indicate reasons why these were chosen)			
Threat 1			
Threat 2			
List top two critical management activities			
Activity 1			
Activity 2			

Name/s of assessor (including people consulted): _____

Contact details (email etc.): _____

Date assessment carried out (Day/Month/Year): _____

* Or formally established in the case of private protected areas

Issue	Criteria	Score	Comments	Next steps
1. Legal status Does the protected area have legal status? *Context*	The protected area is not gazetted	**0**	*Note*: see fourth option for private reserves	
	The government has agreed that the protected area should be gazetted but the process has not yet begun	**1**		
	The protected area is in the process of being gazetted but the process is still incomplete	**2**		
	The protected area has been legally gazetted (or in the case of private reserves is owned by a trust or similar)	**3**		
2. Protected area regulations Are inappropriate land uses and activities (e.g. poaching) controlled? *Context*	There are no mechanisms for controlling inappropriate land use and activities in the protected area	**0**		
	Mechanisms for controlling inappropriate land use and activities in the protected area exist but there are major problems in implementing them effectively	**1**		
	Mechanisms for controlling inappropriate land use and activities in the protected area exist but there are some problems in effectively implementing them	**2**		
	Mechanisms for controlling inappropriate land use and activities in the protected area exist and are being effectively implemented	**3**		
3. Law enforcement Can staff enforce protected area rules well enough? *Context*	The staff have no effective capacity/resources to enforce protected area legislation and regulations	**0**	*Possible issue for comment*: What happens if people are arrested?	
	There are major deficiencies in staff capacity/resources to enforce protected area legislation and regulations (e.g. lack of skills, no patrol budget)	**1**		
	The staff have acceptable capacity/resources to enforce protected area legislation and regulations but some deficiencies remain	**2**		
	The staff have excellent capacity/resources to enforce protected area legislation and regulations	**3**		
4. Protected area objectives Have objectives been agreed? *Planning*	No firm objectives have been agreed for the protected area	**0**		
	The protected area has agreed objectives, but is not managed according to these objectives	**1**		
	The protected area has agreed objectives, but these are only partially implemented	**2**		
	The protected area has agreed objectives and is managed to meet these objectives	**3**		
5. Protected area design Does the protected area need enlarging, corridors etc to meet its objectives? *Planning*	Inadequacies in design mean achieving the protected areas major management objectives of the protected area is impossible	**0**	*Possible issue for comment:* does the protected area contain different management zones and are these well maintained?	
	Inadequacies in design mean that achievement of major objectives are constrained to some extent	**1**		
	Design is not significantly constraining achievement of major objectives, but could be improved	**2**		
	Reserve design features are particularly aiding achievement of major objectives of the protected area	**3**		

Issue	Criteria	Score	Comments	Next steps
6. Protected area boundary demarcation Is the boundary known and demar-cated? *Context*	The boundary of the protected area is not known by the management authority or local residents/neighbouring land users	**0**	*Possible issue for comment:* are there tenure disagreements affecting the protected area?	
	The boundary of the protected area is known by the management authority but is not known by local residents/neighbouring land users	**1**		
	The boundary of the protected area is known by both the management authority and local residents but is not appropriately demarcated	**2**		
	The boundary of the protected area is known by the management authority and local residents and is ap-propriately demarcated	**3**		
7. Management plan Is there a manage-ment plan and is it being implemented? *Planning*	There is no management plan for the protected area	**0**		
	A management plan is being prepared or has been prepared but is not being implemented	**1**		
	An approved management plan exists but it is only being partially implemented because of funding con-straints or other problems	**2**		
	An approved management plan exists and is being implemented	**3**		
Additional points *Planning*	The planning process allows adequate opportunity for key stakeholders to influence the management plan	**+1**		
	There is an established schedule and process for periodic review and updating of the management plan	**+1**		
	The results of monitoring, research and evaluation are routinely incorporated into planning	**+1**		
8. Regular work plan Is there an annual work plan? *Planning/Outputs*	No regular work plan exists	**0**		
	A regular work plan exists but activities are not moni-tored against the plan's targets	**1**		
	A regular work plan exists and actions are monitored against the plan's targets, but many activities are not completed	**2**		
	A regular work plan exists, actions are monitored against the plan's targets and most or all prescribed activities are completed	**3**		
9. Resource inventory Do you have enough informa-tion to manage the area? *Context*	There is little or no information available on the critical habitats, species and cultural values of the protected area	**0**		
	Information on the critical habitats, species and cul-tural values of the protected area is not sufficient to support planning and decision making	**1**		
	Information on the critical habitats, species and cultural values of the protected area is sufficient for key areas of planning/decision making but the nec-essary survey work is not being maintained	**2**		
	Information concerning on the critical habitats, spe-cies and cultural values of the protected area is suf-ficient to support planning and decision making and is being maintained	**3**		

Issue	Criteria	Score	Comments	Next steps
10. Research Is there a pro-gramme of manage-ment-orientated survey and research work? *Inputs*	There is no survey or research work taking place in the protected area	**0**		
	There is some *ad hoc* survey and research work	**1**		
	There is considerable survey and research work but it is not directed towards the needs of protected area management	**2**		
	There is a comprehensive, integrated programme of survey and research work, which is relevant to management needs	**3**		
11. Resource man-agement Is the protected area adequately man-aged (e.g. for fire, invasive species, poaching)? *Process*	Requirements for active management of critical eco-systems, species and cultural values have not been assessed	**0**		
	Requirements for active management of critical eco-systems, species and cultural values are known but are not being addressed	**1**		
	Requirements for active management of critical eco-systems, species and cultural values are only being partially addressed	**2**		
	Requirements for active management of critical eco-systems, species and cultural values are being sub-stantially or fully addressed	**3**		
12. Staff numbers Are there enough people employed to manage the pro-tected area? *Inputs*	There are no staff	**0**		
	Staff numbers are inadequate for critical management activities	**1**		
	Staff numbers are below optimum level for critical man-agement activities	**2**		
	Staff numbers are adequate for the management needs of the site	**3**		
13. Personnel man-agement Are the staff man-aged well enough? *Process*	Problems with personnel management constrain the achievement of major management objectives	**0**		
	Problems with personnel management partially con-strain the achievement of major management objec-tives	**1**		
	Personnel management is adequate to the achieve-ment of major management objectives but could be improved	**2**		
	Personnel management is excellent and aids the achievement major management objectives	**3**		
14. Staff training Is there enough training for staff? *Inputs/Process*	Staff are untrained	**0**		
	Staff training and skills are low relative to the needs of the protected area	**1**		
	Staff training and skills are adequate, but could be further improved to fully achieve the objectives of management	**2**		
	Staff training and skills are in tune with the manage-ment needs of the protected area, and with anticipated future needs	**3**		

Issue	Criteria	Score	Comments	Next steps
15. Current budget Is the current budget sufficient? *Inputs*	There is no budget for the protected area	**0**		
	The available budget is inadequate for basic management needs and presents a serious constraint to the capacity to manage	**1**		
	The available budget is acceptable, but could be further improved to fully achieve effective management	**2**		
	The available budget is sufficient and meets the full management needs of the protected area	**3**		
16. Security of budget Is the budget secure? *Inputs*	There is no secure budget for the protected area and management is wholly reliant on outside or year by year funding	**0**		
	There is very little secure budget and the protected area could not function adequately without outside funding	**1**		
	There is a reasonably secure core budget for the protected area but many innovations and initiatives are reliant on outside funding	**2**		
	There is a secure budget for the protected area and its management needs on a multi-year cycle	**3**		
17. Management of budget Is the budget managed to meet critical management needs? *Process*	Budget management is poor and significantly undermines effectiveness	**0**		
	Budget management is poor and constrains effectiveness	**1**		
	Budget management is adequate but could be improved	**2**		
	Budget management is excellent and aids effectiveness	**3**		
18. Equipment Are there adequate equipment and facilities? *Process*	There are little or no equipment and facilities	**0**		
	There are some equipment and facilities but these are wholly inadequate	**1**		
	There are equipment and facilities, but still some major gaps that constrain management	**2**		
	There are adequate equipment and facilities	**3**		
19. Maintenance of equipment Is equipment adequately maintained? *Process*	There is little or no maintenance of equipment and facilities	**0**		
	There is some *ad hoc* maintenance of equipment and facilities	**1**		
	There is maintenance of equipment and facilities, but there are some important gaps in maintenance	**2**		
	Equipment and facilities are well maintained	**3**		
20. Education and awareness programme Is there a planned education programme? *Process*	There is no education and awareness programme	**0**		
	There is a limited and *ad hoc* education and awareness programme, but no overall planning for this	**1**		
	There is a planned education and awareness programme but there are still serious gaps	**2**		
	There is a planned and effective education and awareness programme fully linked to the objectives and needs of the protected area	**3**		

Issue	Criteria	Score	Comments	Next steps
21. State and commercial neighbours Is there co-operation with adjacent land users? *Process*	There is no contact between managers and neighbouring official or corporate land users	0		
	There is limited contact between managers and neighbouring official or corporate land users	1		
	There is regular contact between managers and neighbouring official or corporate land users, but only limited co-operation	2		
	There is regular contact between managers and neighbouring official or corporate land users, and substantial co-operation on management	3		
22. Indigenous people Do indigenous and traditional peoples resident or regularly using the PA have input to management decisions? *Process*	Indigenous and traditional peoples have no input into decisions relating to the management of the protected area	0		
	Indigenous and traditional peoples have some input into discussions relating to management but no direct involvement in the resulting decisions	1		
	Indigenous and traditional peoples directly contribute to some decisions relating to management	2		
	Indigenous and traditional peoples directly participate in making decisions relating to management	3		
23. Local communities Do local communities resident or near the protected area have input to management decisions? *Process*	Local communities have no input into decisions relating to the management of the protected area	0		
	Local communities have some input into discussions relating to management but no direct involvement in the resulting decisions	1		
	Local communities directly contribute to some decisions relating to management	2		
	Local communities directly participate in making decisions relating to management	3		
Additional points *Outputs*	There is open communication and trust between local stakeholders and protected area managers	+1		
	Programmes to enhance local community welfare, while conserving protected area resources, are being implemented	+1		
24. Visitor facilities Are visitor facilities (for tourists, pilgrims etc) good enough? *Outputs*	There are no visitor facilities and services	0	*Possible issue for comment:* Do visitors damage the protected area?	
	Visitor facilities and services are inappropriate for current levels of visitation or are under construction	1		
	Visitor facilities and services are adequate for current levels of visitation but could be improved	2		
	Visitor facilities and services are excellent for current levels of visitation	3		
25. Commercial tourism Do commercial tour operators contribute to protected area management? *Process*	There is little or no contact between managers and tourism operators using the protected area	0	*Possible issue for comment:* examples of contributions	
	There is contact between managers and tourism operators but this is largely confined to administrative or regulatory matters	1		
	There is limited co-operation between managers and tourism operators to enhance visitor experiences and maintain protected area values	2		
	There is excellent co-operation between managers and tourism operators to enhance visitor experiences, protect values and resolve conflicts	3		

10

Issue	Criteria	Score	Comments	Next steps
26. Fees If fees (tourism, fines) are applied, do they help protected area management? *Outputs*	Although fees are theoretically applied, they are not collected	**0**		
	The fee is collected, but it goes straight to central government and is not returned to the protected area or its environs	**1**		
	The fee is collected, but is disbursed to the local authority rather than the protected area	**2**		
	There is a fee for visiting the protected area that helps to support this and/or other protected areas	**3**		
27. Condition assessment Is the protected area being managed consistent to its objectives? *Outcomes*	Important biodiversity, ecological and cultural values are being severely degraded	**0**	*Possible issue for comment:* It is important to provide details of the biodiversity, ecological or cultural values being affected	
	Some biodiversity, ecological and cultural values are being severely degraded	**1**		
	Some biodiversity, ecological and cultural values are being partially degraded but the most important values have not been significantly impacted	**2**		
	Biodiversity, ecological and cultural values are predominantly intact	**3**		
Additional points *Outputs*	There are active programmes for restoration of degraded areas within the protected area and/or the protected area buffer zone	**+1**		
28. Access assessment Is access/resource use sufficiently controlled? *Outcomes*	Protection systems (patrols, permits etc) are ineffective in controlling access or use of the reserve in accordance with designated objectives	**0**		
	Protection systems are only partially effective in controlling access or use of the reserve in accordance with designated objectives	**1**		
	Protection systems are moderately effective in controlling access or use of the reserve in accordance with designated objectives	**2**		
	Protection systems are largely or wholly effective in controlling access or use of the reserve in accordance with designated objectives	**3**		
29. Economic benefit assessment Is the protected area providing economic benefits to local communities? *Outcomes*	The existence of the protected area has reduced the options for economic development of the local communities	**0**	*Possible issue for comment:* how does national or regional development impact on the protected area?	
	The existence of the protected area has neither damaged nor benefited the local economy	**1**		
	There is some flow of economic benefits to local communities from the existence of the protected area but this is of minor significance to the regional economy	**2**		
	There is a significant or major flow of economic benefits to local communities from activities in and around the protected area (e.g. employment of locals, locally operated commercial tours etc)	**3**		

Issue	Criteria	Score	Comments	Next steps
30. Monitoring and evaluation	There is no monitoring and evaluation in the protected area	**0**		
	There is some *ad hoc* monitoring and evaluation, but no overall strategy and/or no regular collection of results	**1**		
Are management activities monitored against perfor-mance?	There is an agreed and implemented monitoring and evaluation system but results are not systematically used for management	**2**		
Planning/Process	A good monitoring and evaluation system exists, is well implemented and used in adaptive management	**3**		

TOTAL SCORE:	