

Nov.98

**GLOBAL ENVIRONMENT FACILITY (GEF)  
PROPOSAL FOR PROJECT DEVELOPMENT & PREPARATION FACILITY  
(PDF)  
BLOCK B GRANT**

**Project Title:** Millennium Assessment of the State of the World's Ecosystems

**Implementing Agency:** United Nations Environment Programme (UNEP)

**Executing Agency:** UNEP, World Resources Institute (WRI), UNDP and the World Bank, in collaboration with International Food Policy Research Institute, World Conservation Monitoring Centre, World Conservation Union (IUCN), and in consultation with Conservation International, FAO, ICSU/SCOPE, WWF, Wetlands International and the Secretariats of the CBD, CCD and the UNFCCC.

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*Partner*  
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**Countries:** Global

**GEF Focal Area:** Biodiversity, cross-cutting over Operational Programs #1, #2, #3 and #4. *Wab??*

**PDF-B Funding Requested:** US \$350,000

**PDF-B Associated Co-funding:**

WRI: US \$600,000  
UNEP: US \$400,000  
UNDP: US \$400,000  
The World Bank: US \$400,000  
-to be raised: US \$1,850,000

*each fund*

**Block A grant awarded:** No

**Estimated Starting Date:**

**Project:** Dec. '99  
**PDF B:** Jan. '99

**Project Duration:**

30 months (full project)  
12 months (PDF)

*14 yrs*

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<b>FDF B Activities</b>
Activity 1 Establis Steering Committe
Activity 2 Develop Assessment Protot
Activity 3 Finaliza

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## 1. BACKGROUND

1.1 Human development worldwide is tightly linked to the productivity of ecosystems. Declining agricultural productivity, diminished freshwater supplies reduced timber productivity and declining fish harvests can exact a significant toll on local economies and seriously constrain national development. Yet knowledge of the state of the earth's ecosystems is astonishingly poor. Although global land use data are now available and we have considerable understanding of the pressures on ecosystems, there is no global assessment of the state or condition of ecosystems. And, it is the condition of agricultural, rangeland, forest, freshwater and marine systems that ultimately influences development prospects. In what regions is agricultural productivity declining through salinization or soil erosion? Where has the yield or quality of water in freshwater ecosystems been degraded? Where do we see significant declines in rangeland productivity or opportunities to restore lost productivity? Policy-makers don't have answers to these basic questions.

1.2 No global assessment of the state of the earth's ecosystems exists or has been attempted. Without this information, national and international institutions are unable to effectively focus their resources on the best opportunities for maintaining or restoring environmental productivity to meet developmental goals. Improved knowledge of where the goods and services we obtain from ecosystems are at risk and where their productivity remains high and where it is being degraded could significantly enhance development planning and natural resource management. Just as scientists can identify biodiversity 'hot spots' where biodiversity is threatened and conservation investments can yield significant benefits, we need to be able to identify the 'hot spots' of declining productivity from earth's living systems. In these hotspots of declining productivity, human livelihoods are at risk without concerted interventions.

1.3 The *Study of the GEF's Overall Performance* assessed the primary issue of whether the GEF can and should do more to set priorities for specific ecosystems or ecosystem types. It noted that while numerous scientifically based approaches have been advanced as the base for setting priorities in biodiversity conservation, for example criteria such as species richness or endemism of an ecosystem, hot spots and the expanse of relatively undisturbed forest, these were criticized for failing to distinguish different types of ecosystems.

1.4 It further states that the GEF Operational Strategy itself recognises that no consensus has been reached among different specialists on what approach to use for priority setting, acknowledging that further efforts are needed to develop a GEF approach. The *Study of the GEF's Overall Performance* noted that the GEF has not always focused its programming on the sites of greatest global importance within each country and that "GEF has no strategy for ensuring that resources are going to those ecosystem types that are most important or that representatives of each type are funded over a period of time." The study team concluded that the GEF Council would benefit from a strategy for prioritising in biodiversity programming and that

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**TABLE 2: PRELIMINARY DRAFT WORKPLAN AND TIMETABLE**

Activities	Calendar Year 1999											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Establishment and Convening of Committee (Two meetings)												
Development of Millennium Prototype												
Finalization of Project Document												

Activities
Committee
Activities
Assessment
Activities
Preparation
Inclusion
TOTAL

Preparation  
December  
preparation  
funding  
activities  
Foundational

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such an exercise should identify ecosystems and ecosystem types as priorities in OP#2, #3, and #4.

1.5 Without significantly improved information on the extent and condition of existing ecosystems and the threats they face, priority setting for GEF programming is severely hindered. Moreover, improved understanding of status, threats and the likely future scenarios for changes in ecosystems is needed to help provide a baseline against which the impact of GEF project activities can be measured.

1.6 A number of assessments and priority-setting exercises have been undertaken in recent years that provide valuable information on ecosystems. However, these assessments and strategies generally lack a comprehensive ecosystems approach advocated by the biodiversity Operational Programs of the GEF. Particularly in light of the substantially improved body of information on ecosystems that is now becoming available through research and remote sensing, a Global Assessment of the State of the World's Ecosystems is therefore timely and could build on and benefit from the relevant and prior assessments.

1.7 Moreover, such an assessment could underpin a wide range of other national and international efforts to address environment and development challenges, ranging from desertification to climate change. These environmental challenges are interlinked, yet scientific input into each challenge has often given relatively little attention to these interlinkages. This calls for a more integrative assessment process, and in particular a process that can highlight the linkages between questions relevant to decision-makers addressing climate, biodiversity, freshwater, marine and forest issues. A global assessment of the world's ecosystems can provide the integrated foundation for action.

1.8 The 21st Century will see major efforts to reverse the declining capacity of ecosystems to provide goods and services to meet human needs. If those efforts are to succeed, they must be guided by a strong knowledge base. An assessment of this nature would help the GEF in fulfilling one of its main strategic considerations within its biodiversity focal area by providing the necessary information for the GEF to "protect and sustainably manage ecosystems through targeted and cost effective interventions." In addition, the GEF Operational Strategy states that "within particular ecosystems, particular attention will be given to the degree of threat, level of vulnerability and priority status at national and regional levels." The present proposal addresses the issues of threat, vulnerability and priority status required for project selection within the context of the biodiversity portfolio of the GEF while providing valuable information relevant to priority setting in each of the other GEF focal areas.

1.9 An assessment of this globally comprehensive nature and scope would not normally be undertaken in its entirety by UNEP, UNDP and the World Bank. While each undertake assessment activities, these are either focused on a particular portion of the earth's surface or on a specific problem sector or issue. Where state-of-environment reports are produced, either at the regional or global level, they are

TABLE 1 Costs Table - Framework Budget by Activity

	GEF CONTRIBUTION US \$	CO-FINANCING (IN CASH & KIND)				
		UNEP	WRI	UNDP	WORLD BANK	OTHERS
Activity 1: Establishment and Convening of Steering Committee	80,000	-	100,000	-	-	-
Activity 2: Development of the Millennium Assessment Prototype	250,000	50,000	150,000	50,000	50,000	-
Activity 3: Finalization of Project Document	20,000	-	-	-	-	-
Preparation and outreach for World Resources 2000 including regional workshops and release of report	-	350,000	350,000	350,000	350,000	1,850,000
<b>TOTAL COSTS</b>	<b>350,000</b>	<b>400,000</b>	<b>600,000</b>	<b>400,000</b>	<b>400,000</b>	<b>1,850,000</b>

Preparation of the GEF project is being undertaken as an integral component of a linked set of activities taking place between September 1998 and December 2000 involving the establishment of a Steering Committee, development of the "Millennium Assessment Prototype" and the preparation and release of World Resources 2000-2001. The budget for this entire set of activities is US \$4 million. This proposal for PDF B is to support this package of activities (Activities 1-3) during the period of January 1999 to December 1999 during which time the specific activities leading to the development of the GEF proposal will take place. Funding is being pursued through a proposal to the United Nations Foundation and additional financial support is being explored with European Bilateral donors and with the US government.

→ no detail on the specifics → consultation →

based on the availability of existing information. Most globally comprehensive reports are in fact, assessments of assessments. As indicated above, such a course does not produce the true picture of the state of the earth's ecosystems necessary for sound planning. A scientific assessment of the world's ecosystems would therefore only happen if the necessary resources, over and above the ongoing programmes of each of the proponents and other partners, can be secured. A much needed knowledge base against which we can accurately measure trends in the health of global ecosystems is therefore dependent on the type of project proposed here. The project would therefore produce an assessment which would not otherwise occur and which will complement the ongoing review activities of all the involved agencies.

### ***Justification for PDF-B***

1.10 This PDF B proposal is designed to support project preparatory activities for a global assessment of the earth's ecosystems. Project preparatory activities are necessary for preparing the institutional and technical framework for carrying out a global ecosystem-based assessment, for compiling necessary data produced on pressures and conditions of various ecosystems; and, for delineating roles and responsibilities of all relevant agencies in the full scale assessment in order to build on necessary relevant data and ensure ownership from key institutions and countries around the world.

## **2. Summary of Project Objectives and Description**

2.1 The overall objective of the project, to be developed under this PDF B, will be to undertake a global assessment of the state of ecosystems. The overarching goals of this project are:

- (a) To produce a peer-reviewed global assessment of the extent, condition and future prospects for Earth's ecosystems; that is, of the capacity of various ecosystems to provide the goods and services we desire;
- (b) To identify key policies and practices enhancing or degrading the condition of each ecosystem and the goods and services it provides;
- (c) To provide guidance for the design of improved monitoring and assessment networks to enhance the availability of information on the status of ecological systems for national and sub-national policymakers and resource managers.

The results of this assessment will provide the GEF Council with a framework for deciding on the issues, problems and regions where GEF funding could have the greatest impact on the status of biodiversity and will contribute to planning and decision making for GEF activities in climate and international waters. The results

resources to the activities outlined above. The PDF B grant will be used primarily to finance the convening of the Steering Committee; consultation with experts on the Millennium Assessment Prototype which will help in the formulation of a framework for assessing the capacity of ecosystems to provide the goods and services used by humanity, data compilation and analysis being undertaken for the Millennium Assessment Prototype, and the preparation and finalization of the GEF Project Brief.

*Expected duration of the PDF-B activities*

8.2 The PDF-B activities are expected to begin in January 1999, and to be terminated in December 1999.



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will also help the GEF establish baselines for evaluating progress toward achieving conservation and development goals. The assessment will also seek to provide input on ecosystem science into the international environmental agreements, including the Convention on Biological Diversity, the Convention to Combat Desertification, and the Framework Convention on Climate Change. Finally, the assessment should provide a framework and data that will be helpful to individual nations seeking to assess the capacity of their ecosystems to provide goods and services.

More specifically, the assessment is expected to provide up-to-date regional and global information on the capacity of major ecosystems to provide the goods and services of importance to human development. These ecosystems are likely to include: marine ecosystems, forests, grassland/aridlands, urban, agroecosystems, mountains, and freshwater (including wetlands and taking into account biodiversity related assessments covered by the Global International Waters Assessment). The assessment would examine measures and indicators of extent, pressures, condition, and response (taking into account the UNEP GEF financed Biodiversity Indicators project) and is likely to develop scenarios or "plausible futures" for various attributes of these ecosystems where justified by the availability of data and scientific understanding of the system. The assessment will develop indicators for evaluating the condition of key "goods and services" provided by ecosystems, including water quality/quantity, food production, biodiversity protection, and carbon sequestration. Finally, the assessment will develop a baseline set of indicators to track the impact and progress of interventions on the state of the environment in the selected ecosystems worldwide.

The science assessment will utilize a data-driven expert assessment process, similar to processes used by the Intergovernmental Panel on Climate Change (IPCC) and the Global Biodiversity Assessment (GBA). It will be conducted in a decentralized manner through regional expert groups focused on particular ecosystems. For many regions, data limitations will prevent accurate assessment of condition or trends. Indeed, one goal of the Assessment, like past international science assessments, is to help identify important data gaps and stimulate additional monitoring and research tailored to meet policy and management needs.

### 3. Description of the Proposed PDF-B Activities

The development of the Millennium Assessment of Ecosystems Project is being undertaken as an integral component of a set of activities being coordinated by UNEP, UNDP, the World Bank and WRI involving: establishment of a Steering Committee, development of a "prototype" science assessment, and preparation, publication and release of World Resources 2000-2001. This issue of World Resources will focus on ecosystems and incorporate the results of the prototype science assessment. Through this linked set of activities, the partners seek to ensure that care is taken in designing a set of indicators that can meet the needs of key audiences, that active participation of experts and policymakers in developing countries and in various international

COP guidance to the GEF has already been provided on several articles of the Convention on Biological Diversity. In particular, this project will respond to COP guidance to the GEF on Article 8 by facilitating GEF *in situ* project activity towards priority ecosystems. In addition, by building into this project, an issue-based focus, the project will ensure that COP-guidance to the GEF on priority issues (e.g. incentive measures, biosafety, exotic invasive species, etc.) will be addressed through such an assessment. The international environmental conventions will also be represented on the Steering Committee ensuring integration of the science input to the various conventions and integration of input to the conventions and the GEF.

#### 5. Support at the National Level

Developing countries are in the process of implementing the international environmental conventions and Agenda 21 and need access to subnational, national, and regional information on the extent, condition and pressures on their ecosystems. Colombia has recently completed a map of its ecosystems and wants to use this information in national planning. They are seeking advice on which indicators to develop to assess the value of ecosystem goods and services. China is beginning to use geographic information systems to assess which lands should be protected to reduce the level of seasonal flooding and reportedly they are seeking to make these land use decisions by taking into consideration conflicting values. The African Centre for Technology Studies (ACTS) is proposign to work with experts from Kenya, Tanzania and Uganda to assess biodiversity in East Africa and seek indicators of the condition and value of these living resources. The Millenium Assessment Prototype and the full Millenium Assessment will be able to provide a framework that countries can use to identify key indicators of ecosystem goods and services. The Millennium Assessment project will also provide them with the best available data and help them identify priorities for future data and monitoring programs.

#### 6. Outputs of the PDF

- Reports of the two Steering Committee Meetings;
- Millenium Assessment Prototype (Executive Summary and Technical Annex);
- GEF Project Brief for the full scale assessment.

#### 7. Special Features - Aspects of the Analysis for particular attention

None.

#### 8. Items to be financed by the PDF-B Activities

- 8.1 Table 1 outlines the support requested from the GEF, and the allocation of

institutions helps shape the assessment at an early stage, and that the visibility and attention given to the challenge of maintaining the productive capacity of global ecosystems is heightened at the initiation of the full assessment. We focus in the proposal on those activities that are most directly intended to help design the full international assessment, particularly the establishment of the Steering Committee and preparation of the Millennium Assessment "prototype" (MAP).

**Activity 1. Establishment and Convening of the Steering Committee.**

A Steering Committee will be established comprising of scientific experts, representatives of key audiences for the product of the assessment, and representatives of institutions that are the primary sources of data and information on the state of global ecosystems. The institutions represented on the Steering Committee are expected to include: ICSU, UNEP, WRI, STAP, the GEF Secretariat, Scientific and Technical Bodies of the CBD, CCD and FCCC, FAO, UNDP, The World Bank, IUCN, WCMC, WWF, and others. The first formal meeting will be held in February 1999. Chairmanship of the Committee will be shared among the partner agencies in World Resources Report during the period of the PDF B activities. We expect one outcome of this planning phase to be the design of an institutional arrangement for carrying out the full assessment which is likely to differ in some respects from the arrangement during the planning phase.

The Steering Committee will meet twice during the 12-month project period, once in February 1999 and again in August 1999. The Steering Committee will provide advisory input on the development of the Millennium Assessment Prototype, including the choice of ecosystems, framework for developing indicators, choice of indicators, identification of experts and design of process. It will examine potential institutional arrangements including the feasibility of adopting the approach used by the Global International Waters Assessment. It will identify key needs of the various audiences for the Millennium Assessment (and the MAP) and explore how best to shape the assessment to meet these needs. It will consider potential outreach strategies for the full assessment and the types of products that the assessment should produce. It may commission additional exploratory work beyond the Millennium Assessment Prototype (see below), such as an expert group meeting to explore the untapped potential for remote sensing information in indicator development. And, it will examine potential financial arrangements for supporting the activities of the full assessment. The Committee will review and agree on this package of design elements to set the stage for preparation of the full proposal for the full assessment. The Steering Committee will also be responsible for providing guidance on:

- (a) the major geographic divisions in which the selected regional ecosystem and resource assessments will be carried out;
- (b) a methodology and process for obtaining reliable data and indicators on:
  - the condition of biological resources in the selected ecosystems:

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cpd.*

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**Activity 2. Development of the Millennium Assessment Prototype.**

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The four partner agencies working with international collaborators, will conduct a prototype assessment, the Millennium Assessment Prototype, or MAP. Development of the prototype will involve compilation, for each ecosystem type, of existing map-based information on land cover, extent, pressures and existing published and remote-sensing information on the state or "condition" of the ecosystems. For one or two ecosystems additional work will be undertaken to show the type of information on pressure, state, response, and future scenarios that should be available to best inform decision making. For many regions, data limitations will prevent accurate assessment of condition. Indeed, one goal of the prototype, and the full scientific assessment, is to help identify important data gaps and stimulate additional monitoring and research tailored to meet policy and management needs.

*how identified!*

Preparation of the MAP will involve work by the four partner organizations and additional partners particularly in developing countries to compile existing data, develop ecosystem "synopses" indicating the types of information available for various ecosystem goods and services, and develop new indicators of extent, pressure, or condition where warranted. This preliminary work will then be the focus of expert review involving scientific experts from around the world in February 1999. In August 1999, these experts will have a second opportunity to review the final draft products of the MAP.

**Activity 3. Finalization of the Project Document.**

Following the Second Steering Committee meeting and the completion of the Millennium Assessment Prototype in November 1999, UNEP in conjunction with WRI, will finalize the GEF Project Document in consultation with members of the Steering Committee. The document will be circulated to all participants above to ensure that the document is in conformity with participant's recommendations and in line with the GEF format and requirements. The final project is likely to be of the order of US \$15 million and will take approximately 36 months to complete, although initial findings may be released early in 2002.

**4. Eligibility**

Given that this project is of a global nature, country ownership will be ensured from the onset of implementation of the PDF by fully involving key national and regional developing country institutions and governments in the assessment, design and implementation process. In addition, PDF activities will include the development of an information dissemination and public awareness raising strategy that will help ensure that results from the Assessment are integrated into national and regional planning processes.

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- freshwater ecosystems (including wetlands), marine and oceanic systems, agroecosystems, rangeland and savanna ecosystems, forest ecosystems, mountain ecosystems, and urban ecosystems;
- the state of productivity of the ecosystems (including transboundary ones);
  - the threats/pressures on the selected ecosystems including identification of policies and practices influencing ecosystem condition and productivity;
- (c) a process for developing a baseline set of indicators for monitoring the status of ecosystem productivity in collaboration with IUCN (the Executing Agency for the UNEP/GEF initiative on Biodiversity Indicators) and other organizations;
- (d) the objectives, venue, and participants for two planning meetings:
- the first Steering Committee meeting will be held in February 1999 and focus on developing the basic goals and procedures for implementing a full international science assessment in the year 2000 including: the choice of ecosystems, a framework for developing indicators, the choice of indicators, identification of experts, and design of the process. This event will provide an opportunity for key ecosystem experts to advise on the identification and selection of indicators to be used in the Millennium Assessment Prototype.
  - The second Steering Committee meeting will be held in August 1999 to review the draft Millennium Assessment Prototype, and to complete plans for the full Millennium Assessment including audience, institutional arrangements, political support, scientific support, and financial support.
- (e) an Information Dissemination and Public Awareness Strategy to help ensure, among other activities in the project, that outputs of the assessment have a high level of country-ownership and result in action on-the-ground. Such a strategy will include the mid-term dissemination of results through the *World Resources 2000-2001*, the Millennium Forum and the United Nations Millennium General Assembly. The strategy will also include outreach to specified target groups including policy-makers and researchers;
- (f) modalities for implementing the global assessment, including the feasibility of adopting the approach used by the Global International Waters Assessment (GIWA) project involving Regional Task Teams, the mechanisms used by GIWA for soliciting governmental involvement and the use of a core group for coordinating the process;
- (g) a preliminary draft Implementation Plan for the full project.

will be followed on a protocol for ecosystem management in regions of interest.