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Terminal Evaluation of the UNEP/GEF Project "Millennium Ecosystem Assessment"

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Michael P. Wells
David Grossman
Hugo Navajas

Evaluation and Oversight Unit
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Acronyms and Abbreviations

CARSEA	Caribbean Sea Ecosystem Assessment
CBD	Convention on Biological Diversity
CCD	Convention to Combat Desertification
CITES	Convention on International Trade in Endangered Species of Wild Flora and Fauna
COP	Conference of the Parties
CGIAR	Consultative Group on International Agricultural Research
DEWA	Division of Early Warning and Assessment (of UNEP)
FAO	Food and Agriculture Organization of the United Nations
GBA	Global Biodiversity Assessment
GEF	Global Environment Facility
GEO	Global Environmental Outlook
IC	Incremental Cost
IMOSEB	International Mechanism Of Scientific Expertise on Biodiversity
IPCC	International Panel on Climate Change
IUCN	World Conservation Union
MA	Millennium Ecosystem Assessment
MDGs	Millennium Development Goals
NGO	Nongovernmental Organization
OECD	Organization for Economic Cooperation and Development
Ramsar	Ramsar Convention on Wetlands
RIVM	National Institute for Public Health and the Environment, the Netherlands
SAfMA	Southern African Millennium Ecosystem Assessment
SBSTTA	Subsidiary Body on Scientific, Technical and Technological Advice
SCOPE	Scientific Committee on Problems of the Environment
SGA	Sub-Global Assessment (of the MA)
SGP	GEF Small Grants Programme
TOR	Terms of Reference
TSU	Technical Support Unit
UN	United Nations
UNCMS	United Nations Convention on Migratory Species
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNF	United Nations Foundation
UNFCCC	United Nations Framework Convention on Climate Change
UNFIP	United Nations Fund for International Partnerships
WCMC	World Conservation Monitoring Centre
WHO	World Health Organization
WRI	World Resources Institute

Summary

1. An independent evaluation of the five-year $25 million Millennium Ecosystem Assessment (MA) Project was carried out on behalf of UNEP in the first half of 2006. This report describes the evaluation approach and findings.

2. The objective of the MA was to assess the consequences of ecosystem change for human well-being and the scientific basis for actions needed to enhance the conservation and sustainable use of those systems and their contributions to human well-being. The MA consisted of an assessment of ecosystem services both at a global level and at a sub-global level through local, national and regional studies; the SGAs. Primary users were to be the international ecosystem-related conventions, regional institutions, UN agencies, national governments, civil society and the private sector.

3. The MA Project was coordinated by UNEP in partnership with other agencies. The original project budget was US$ 20.8 million plus $4 million project development funding. $7.0 million was provided by the GEF through UNEP, $4.2 million by UNF, $2.4 million by the Packard Foundation, $1.5 million by the World Bank and $0.8 million by UNEP. In-kind contributions were $7.3 million. Originally planned to run for four years to March 2005, the project was extended by 6 months to September 2005. Completion is expected in 2006.

Overall Findings

4. The MA was a highly complex and challenging project to design and implement on a global scale. There are many important positive aspects to the Project as well as some weaknesses. Most of the weaknesses are attributable either to strategic choices made during the Project design phase or to resource and time constraints that emerged during implementation. Project implementation and management were generally very effective. While it is too early to assess the impacts of the Project, the progress made towards most of the Project's major objectives and intended outcomes can be assessed:

Preparation and Design

5. High quality preliminary work under an Exploratory Steering Committee set the direction and engaged reasonably broad support for the MA. The decision to set the MA's technical objective as assessing the capacity of natural systems to support humanity proved both innovative and far sighted. Engaging the global scientific community to address this issue was critical to ensuring that the findings would be authoritative and credible.

6. A key decision was *not* to carry out the MA through an official inter-governmental process. This helped the Project engage more than 1,400 scientists and experts to carry out the assessment, virtually all of whom worked on a voluntary basis, an extraordinary contribution from the scientific community. Other benefits from working outside an inter-governmental process were the opportunities to engage private sector and civil society organizations in key decision-making roles on the MA Board, as well as greater autonomy and flexibility for the Project. Some important

disadvantages from working outside an inter-governmental process included (i) a significant lack of awareness or engagement by political actors in both developed and developing countries, and (ii) a contribution to the present uncertainty over what should happen next now that the MA has been completed.

Major Achievements

7. The Project has achieved some clear successes:

- The MA has produced a series of credible, authoritative and high quality reports, with a very considerable volume of material well packaged for different audiences at varying levels of complexity.
- The MA emphasis on ecosystem services and their significance for human well-being is widely recognized as having made a major contribution to linking biodiversity conservation with poverty mitigation.
- The MA Conceptual Framework is widely regarded as an innovative and excellent technical analysis that seems likely to have a significant impact on the direction and approach of future applied research, which in turn may lead to more effective ecosystem management decisions and policies.
- The MA responded to and has successfully engaged the secretariats of the CBD and Ramsar.
- The level of interest in carrying out sub-global assessments (SGAs) as well as the number of SGAs actually undertaken (34) far exceeded expectations. Many of these SGAs are still continuing.
- The MA led to the emergence of a genuine global community for multi-scale ecosystem assessment that had not existed previously.
- The Project's capacity building goals appear to have been largely met.
- The MA and its implications are being discussed by various OECD government agencies and may be adopted in various forms. The MA also seems likely to have an impact on future GEF programming.
- Exceptionally able leadership was provided by the Project Director, with strong support from both the Board and the secretariat staff.
- All of these factors have contributed to keeping biodiversity conservation and ecosystem management on the international policy agenda.

Weaknesses

8. The Project's successes are mitigated by some significant weaknesses:

- There is little evidence so far that the MA has had a significant direct impact on policy formulation and decision making, especially in developing countries.
- The Project objectives call for the MA to be used in management and policy decisions, and anticipate the development of 'implementation strategies'. Problems with these objectives include: (i) policy and decision makers were not a part of the MA process; and (ii) the MA has not produced tools, models or methods that can readily be applied by practitioners in the field.
- The lack of specific policy guidance in the MA has contributed to uncertainty on what should happen next and who is supposed to do what with the MA findings.

- Adequate financial resources were not available for communications and outreach after the assessment's major products were released starting in 2005.
- Few developing country SGAs were adequately funded. The quality of SGA products has been variable and most did not connect effectively with the global assessment. Relatively few of the SGAs engaged with local or national decision makers.
- The objectives, outcomes and initial expectations of the MA were probably too ambitious for a four-year project, even allowing for a six month extension.
- One year after the Project's major outputs started to become available, it is not clear what, if anything, should happen next.

Role of UNEP

9. UNEP was the GEF implementing agency and provided overall coordination for the MA Project. The agency played a relatively hands-off role, leaving the project leadership and secretariat to be relatively autonomous. UNEP deserves considerable credit for adopting more of a partnership than an oversight role.

10. The Project Director was hired as a senior UNEP staff member. Other UNEP staff, especially from DEWA, were involved in the partnership of organizations that planned the MA Project and then played a full and constructive role on the MA Board. UNEP has moved ahead and internalized some key elements of the MA approach into its own GEO process. Technical staff inputs from UNEP to the MA process were relatively limited, however.

11. Neither UNEP nor the other main Project partners appear to have taken any specific action to address the major weaknesses identified in the Project.

Worthwhile Use of Funds?

12. The MA seems more likely to influence research agendas than policy agendas, depending on whether the links that the MA has highlighted between ecosystem management and human well-being are translated into tangible projects and programs. A categorical answer on the value of the MA Project is impossible to provide, as a lot depends on what happens next in terms of the MA's influence and impacts. Some of these impacts will happen spontaneously as more people and organizations become aware of the findings, some will happen through individual promotion or use of the MA by the many participants familiar with the process, and some will depend on so far unspecified plans to follow-up or possibly repeat the MA in some form.

13. The shortcomings documented here should not diminish the overall Project performance and the immense effort by many partners that went into moving this complex initiative forwards. As an innovative and largely unprecedented undertaking, the MA faced considerable uncertainty regarding how far the process could be taken or the level of impact generated, neither of which could be reliably predicted in advance.

Follow Up Activities

14. Various follow-up options have been considered by the MA core team and partners. These include: (i) further outreach and communication to ensure that the MA's findings and messages reach as broad an audience as possible; (ii) the production of a report focused on the MA's methodology; (iii) training and capacity-building on the MA's integrated ecosystem assessment approach; and (iv) continued coordination of the SGAs that are still underway. These potential activities all appear to have considerable value.

15. Some MA Board members have called for the assessment to be repeated at regular intervals, following the IPCC example.

16. The MA mid-term evaluation raised several key questions for any decision about the future of the MA, and these remain relevant:

- Should the MA continue, in some form, beyond its current assessment?
- If the MA is to continue, what form should it take?
- What relationship should future MA activities have to other organizations?
- Should the MA remain a multi-stakeholder process or become more intergovernmental?

17. The current unavailability of working models that can readily be used by policymakers to analyze ecosystems services and their trade-offs with development policies and resource allocations constrains the MA's potential for influencing environmental trends on the ground. Translation of the MA into operational methodologies and tools that will support decision making and policy setting seems absolutely critical, even though it is not clear at this point who should do this or how. The MA emphasis on ecosystem services and trade-offs and their links to human well-being have been welcomed by the conservation community as a bridge to development efforts focused on poverty mitigation, in other words making biodiversity more relevant to the needs of society. But the real test will be whether the international development community starts to take up and utilize tools and methods based on the MA approach, and when governments and private firms start to use these tools and methods to guide their investments.

Major Recommendations

18. Immediate priorities for follow-up to the MA are:

1. An MA communications and outreach effort that engages more effectively with decision and policy makers, especially in developing countries.
2. Using the MA findings to develop sets of operational tools and methods that can be adopted and applied by practitioners.
3. Training potential users of these tools and methods, and implementing case studies to demonstrate their value and broader applicability, especially in developing countries.

19. These steps appear vital to maintaining the momentum of the MA and we would not anticipate they should collectively involve an investment of much more than $1 million, which does not seem excessive if it were to significantly enhance the impact of a $20 million project.

20. We encourage the MA stakeholders to develop and assess options for repeating the MA in some form in several years time, ranging from a full-scale repeat to a briefer, less expensive exercise focusing on particular topics related to the MA.

1: Introduction

This Report

1. An independent evaluation of the five-year, $20 million Millennium Ecosystem Assessment (MA) Project was carried out on behalf of UNEP in the first half of 2006. This report describes the evaluation approach and findings.

The Project

Project Rationale

2. The overall goal of the MA Project was to improve the management of ecosystems and their contribution to human well-being by helping to bring the best available information and knowledge on ecosystem services to bear on policy and management decisions. The MA consisted of a global scientific assessment as well as a set of smaller, sub-global assessments (SGAs). More than 1,400 scientists contributed.

3. The project aimed to provide an accurate description of the extent, trends, pressures, conditions and value of different ecosystems of the world, establishing a baseline for the year 2000 and developing a set of plausible scenarios for how the quality and quantity of ecosystem services may change in coming decades in different regions of the world. It also aimed to assess the response options for different ecosystems, identifying policy, institutional arrangements, and technologies that could improve the management of ecosystems.

4. The MA responded to requests for assessment information from the Convention on Biological Diversity (CBD), the Convention to Combat Desertification (CCD) and the Convention on Wetlands (Ramsar), and was implemented as a partnership of institutions and donors that included FAO, UNESCO, UNDP, WHO, the Global Environment Facility, CGIAR, the World Bank, the International Council for Science, IUCN and UNF/UNFIP. The project conforms to the GEF Operational Strategy and Operational Programmes 1, 2, 3 and 4.

5. The project aimed to build capacity at all levels to undertake and act on the findings of integrated ecosystem assessments. The MA results were explicitly intended to be "policy-relevant but not policy-prescriptive". It was originally intended that the project, if successful, would be repeated periodically.

Executing Arrangements

6. The Project was coordinated by UNEP in partnership with these lead co-executing agencies: the World Fish Center, Malaysia; World Resources Institute, USA; UNEP-WCMC, UK; and the Institute of Economic Growth, India. Also acting as co-executing agencies were the Scientific Committee on Problems of the Environment, France; the Meridian Institute, USA; and RIVM, the Netherlands.

7. A Board established to govern the project included representatives from each geographic region, the associated and cooperating partner agencies, the private sector, indigenous people, NGOs and scientists. The Board acted through an Executive

Committee, while an Assessment Panel oversaw the technical and scientific work. Based on the model of the International Panel on Climate Change (IPCC), working groups were established to cover four areas: conditions, responses, scenarios and the SGAs.

8. A Project Director based at the World Fish Centre in Malaysia was responsible for the management of MA operations as well as day-to-day contact with the Assessment Panel and the Co-Chairs of the Working Group. The MA operated with a "distributed" secretariat, with different functions located at seven other co-executing agencies.

9. Originally planned to run for four years to March 2005, the project was extended by 6 months to September 2005. Certain activities related to the translation, printing and distribution of some technical reports were continuing as of mid 2006, with completion expected later in 2006.

Budget

10. The original project budget was US$ 20.8 million plus $4 million project development funding. $7.0 million was provided by the GEF through UNEP, $4.2 million by UNF, $2.4 million by the Packard Foundation, $1.5 million by the World Bank and $0.8 million by UNEP. In-kind contributions were $7.3 million. Further funding was raised for the SGAs during the course of the MA.

The Evaluation

11. UNEP/GEF policy requires all GEF projects to be evaluated by independent evaluators contracted by the UNEP Evaluation and Oversight Unit. The MA Project evaluation was carried by three independent consultants: Michael Wells (team leader, based in Norway), David Grossman (South Africa) and Hugo Navajas (Bolivia).

Terms of Reference

12. The evaluation TOR describes the primary objective of the evaluation as establishing the project impact with reference to objectives and outcomes and evaluating implementation of planned project activities and outputs against actual results (Annex 1). The TOR identifies three main questions:

1. Has the methodology and approach used for conducting the integrated ecosystem assessments effectively built relevant capacity and stakeholder ownership at all levels?
2. Was the scientific assessment sufficiently credible to effectively and adequately meet the information needs of users?
3. To what extent have the project outputs been used and to what extent has the MA process and outputs led to change in ecosystem-related conventions and natural resource management?

13. The TOR call for the evaluation to assess the extent to which the project has (i) helped produce the best available information and knowledge on ecosystem goods and services, (ii) been utilized in policy and management decisions at global, regional,

national and local levels; and (iii) strengthened capacity to undertake and to implement action based on integrated ecosystem assessments.

14. The evaluation focuses mainly, but not exclusively, on the significance, implementation and impacts of the MA in developing countries.

Approach

15. The evaluation team carried out five principal sets of activities between February and May 2006:

1. Reviews of Key Documents. The documents reviewed included the Project document, outputs, performance reports, correspondence, workshop reports, journal articles, meeting minutes, the mid-term evaluation report, documents posted on the MA web site (www.millenniumassessment.org) and a March 2006 report on a survey of MA impacts prepared by the former Project Director (Annex 3).

2. Interviews with a wide range of MA participants and stakeholders. These interviews included Board and Panel members, project management and secretariat staff, convention staff, SGA participants, authors and review editors. They also included staff of UNEP, UNDP, World Bank, CBD Secretariat, Ramsar Secretariat, GEF Secretariat, UNF, bilateral donor organizations, IUCN and other NGOs. The evaluation team interviewed a variety of participants at the CBD COP-8 meeting in Curitiba, Brazil during March 20-31, 2006.

3. Email surveys of MA participants, stakeholders and potential users. Email questionnaires were sent to: all MA Board members; all Co-Chairs of MA Working Groups; all SGAs; all MA Fellows (a capacity building program for junior researchers); and all authors. These questionnaires inquired about (i) the respondents' roles in the MA, (ii) the MA's strengths and weaknesses, (ii) how the MA might have been improved, and (iv) what lessons from the MA experience should be applied to future large-scale environmental assessments? Only qualitative responses were requested. Additional survey questionnaires were sent to the National Steering Committees of the GEF Small Grant Programme in 20 countries to help assess MA awareness and impacts among key stakeholders and potential MA users in developing countries.

4. In-depth reviews of selected sub-global assessments. The evaluation team visited Chile, Southern Africa, and Trinidad and Tobago, with the latter including both the Northern Range and the Assessment of the Caribbean Sea (CARSEA) SGAs. In each case the key SGA documents were reviewed and a variety of local and regional stakeholders were interviewed.

5. Other sources. The evaluation team benefited from participating in two meetings specifically on the MA: (i) a round table discussion on the MA convened at the CBD COP-8 meeting in Curitiba, Brazil on March 31, 2006 attended by about 40 people from 20 countries and several multilateral organizations, and (ii) a workshop on the MA as an initiative of the Nordic Council of Ministers attended by about 75 people from a variety of countries and organizations, held at the

annual meeting of the International Association for Impact Assessment in Stavanger, Norway on May 24, 2006. The evaluation team was also granted access to the unpublished, preliminary report on a workshop on the MA organized by the UK Department for Environment, Food and Rural Affairs in London on February 3, 2006 that was attended by over 50 participants from UK government departments and agencies as well as research organizations.

16. People interviewed and respondents to email questionnaires are listed in Annex 2, which does not include (i) the participants in the meetings described in 5. above, (ii) official national delegates to CBD COP-8, or (iii) interviewees who requested anonymity.

The Evaluation Report

17. The report follows, as far as possible, the approach and outline called for in the TOR. An overall rating of the Project is included in chapter three.

2: Major Findings

A. Attainment of objectives and planned results

18. The extent to which the stated Project objectives have been met are analyzed in Table 2.1.

Table 2.1. Millennium Ecosystem Assessment - Achievements of Goals, Purposes and Outcomes

From Logical Framework in Project Document (2000)		Evaluation Findings (numbered paragraphs correspond to Verifiable Indicators)
Goals, Purpose, Outcomes	**Verifiable Indicators**	
Development Goal		
Management of ecosystems to sustainably provide goods and services to human development is enhanced	1. Findings of the MA are used by global, national and local institutions. 2. Institutions adopt integrated MA assessment methodology for use in regions other than those directly involved in the MA. 3. Rate of habitat conversion and watershed degradation is slowed.	The MA has made, and is likely to continue to make, a positive contribution to the Project's development goal, although this is more of a long-term vision statement and is expressed too generally to be assessed. 1. Elements of the MA findings, approach and conceptual framework are being discussed and may be adopted in some form by OECD government agencies in, e.g., Canada, Denmark, France, Germany, Norway, Sweden and the UK. China plans on conducting a national assessment using the MA approach. Some SGA results are being used within their regions: the SAfMA findings informed the preparation of South Africa's first National Strategy for Sustainable Development, and CARSEA has been linked to an integrated management approach for the Caribbean Sea. 2. There are few indications of MA assessment methodologies being used in developing countries outside the 34 SGA areas, although national MAs may be conducted in China and France. 3. The Project does not appear to have had an effect on the rate of habitat conversion or watershed degradation, although this could hardly have been expected within a year of the Project's main outputs being released. It is difficult to see how this is a valid "verifiable indicator" for the Project.

From Logical Framework in Project Document (2000)		Evaluation Findings (numbered paragraphs correspond to Verifiable Indicators)
Goals, Purpose, Outcomes	**Verifiable Indicators**	
Project Purpose		
The best available information and knowledge on ecosystem services is utilized in policy and management decisions at global, regional, national and local levels.	1. Adoption of the findings by the international environmental conventions and relevant regional, national, and local authorities, NGOs, or private companies. 2. Development of implementation strategies.	It is clear that the best available information and knowledge on ecosystem services was drawn on as a source for the MA process and outputs. The large and well-coordinated community of scientists involved has successfully synthesized the best available information and continues to disseminate reports and publications. Whether this knowledge and information was assembled, analyzed and presented in a way that directly facilitates its use in policy and management decisions on different scales is less clear. So far there is little evidence that MA outputs have influenced management and policy decisions, although this was an ambitious purpose for a Project of this nature. Many people and organizations have found particular value in the MA conceptual framework. While most MA outputs cannot easily be applied to management and policy decisions, the conceptual framework does seem likely to have a significant impact on the direction of future research activities, which in turn can be expected to generate more specific policy guidance. Awareness of the MA among developing country decision makers appears very low. 1. The MA has influenced decisions of the CBD and Ramsar, although neither has "adopted" the MA. Both the CBD and Ramsar secretariats made important contributions to the MA and have already made extensive use of its products. A CDB request that more work be undertaken on the economic valuation of ecosystem services reflects a fairly broad consensus that this is a key next priority following the MA's contribution to highlighting the link between ecosystem services and human wellbeing. The MA's influence on other multilateral environmental agreements has been much less. There are signs that certain GEF programs and strategies as well as some scientific

From Logical Framework in Project Document (2000)		Evaluation Findings (numbered paragraphs correspond to Verifiable Indicators)
Goals, Purpose, Outcomes	**Verifiable Indicators**	
		bodies are starting to be influenced by the MA. IUCN has responded favorably to and has strongly promoted the MA, while WRI has based some of its future work programs on the MA. Reactions from other international conservation NGOs has been mixed and awareness/recognition among NGOs in the development sector appears low. Private sector firms have shown interest in the MA, with some business leaders participating in the MA Board, although there is little sign so far of companies taking any significant actions directly in response to the MA. The MA has significantly influenced the approach and methodology used by UNEP in preparing its 2007 Global Environmental Outlook assessment. 2. As the Project was explicitly not policy prescriptive, it is not evident that the development of implementation strategies would be a logical outcome of the Project nor is it clear what form these would take as the MA approach does not readily lend itself to be implemented by practitioners or decision makers. Discussions of a follow-up GEF medium-sized project (i.e., with a budget <$1 million) have continued over an extended period and were unresolved at the time of writing.
Capacity to undertake integrated ecosystem assessments and to implement action based on the assessments is strengthened	1. Continuation of assessment activities within the regions, nations or communities after the completion of the MA. 2. Establishment of ecosystem assessments in regions outside of the areas of the catalytic assessments	The capacity to *undertake* integrated ecosystem assessments has been built among the global academic and research community with an interest in biodiversity and related resource management issues, as well as among many of the SGA teams and networks. The MA Fellows program aimed at encouraging younger researchers was outstandingly successful at such capacity building. MA materials have been incorporated into or inspired a significant number of academic and professional training programs. It is much less evident that the capacity to *implement* actions based on integrated ecosystem assessments has been enhanced. The MA did not seem

From Logical Framework in Project Document (2000)		Evaluation Findings (numbered paragraphs correspond to Verifiable Indicators)
Goals, Purpose, Outcomes	**Verifiable Indicators**	
		designed to build this type of capacity and relatively few managers or policy makers, who are among the potential users of the MA outputs, were engaged in the Project. 1. SGAs are continuing in a number of regions primarily because they began later than the global MA and are still incomplete. It is too early to assess whether these assessment activities are likely to continue after those activities specifically associated with the MA Project have been completed. A few countries, notably China and France, have started to make plans to conduct national ecosystem assessments. 2. There are few indications of MA assessment methodologies being used in developing countries outside the 34 SGA areas[1]. It does seem likely, however, that the methodology and emphasis of future biodiversity assessments or strategic environmental assessments will be influenced by the MA conceptual framework and focus on ecosystem services as a key factor in human well being.
Outcomes		
A methodology for conducting integrated ecosystem assessments at local, national, regional and global scales is produced	By the end of year 1 a methodology document has been approved by the Assessment Panel	The MA has developed an innovative and impressive conceptual framework that is based on ecosystem services, drivers of ecosystems change and multi-scale assessments. This is widely considered to be the Project's most significant technical output. A methodology for conducting integrated ecosystem assessments at the local, national and global scales has not been produced, however. There are mixed views among the MA's key participants on whether it would be practical or desirable to develop a user manual or "tool kit" that would provide guidance to future implementation of the MA methodology on different spatial scales. Various promising approaches being piloted through the SGAs

[1] A notable exception is UNEP's Poverty and Environment Project using the MA framework in 7 African countries to mainstream environment into the country Poverty Reduction Strategy Papers, with help from SAfMA

From Logical Framework in Project Document (2000)		Evaluation Findings (numbered paragraphs correspond to Verifiable Indicators)
Goals, Purpose, Outcomes	**Verifiable Indicators**	
		are at different stages of completion and these experiences could potentially provide important inputs to the development of such guidelines.
A global assessment of pressures, conditions, trends, scenarios, and response options related to ecosystem goods and services is produced	By the end of year 3 a global assessment has been approved by the MA Board	This outcome was fully achieved, representing the major tangible output of the Project. The successful production of the global assessment was a significant and impressive achievement that is a credit to the Project leadership and all participants. The fact that the Project required a time extension (to 4.5 years) and is still incomplete illustrates how the original goal of producing this assessment by year 3 underappreciated the magnitude of this task.
National, regional and local integrated ecosystem assessments are catalyzed by the MA process	1. By the end of year 3, ten catalytic local, national and global assessments have been completed. 2. By the end of year 3 several regional scenario studies have been completed. 3. Plans are underway to launch similar assessments in other locales.	1, 2, 3 A total of 18 approved and 16 affiliated SGAs at regional, national and local levels have been initiated under the MA umbrella, significantly more than originally anticipated. Most are still under implementation and several appear to have the potential to produce useful and important outputs. The MA secretariat provided significant technical advice and moral support to the SGAs, although they had little ability to direct these initiatives and tended to encourage broad participation rather than strict adherence to specific criteria. The SGAs: • Resulted in significant capacity building among the researchers involved. • Were underfinanced, with a few notable exceptions (e.g., Chile, Southern Africa and Western China among developing countries). • Varied considerably in their technical quality and in some cases were led by institutions with limited capacities. • Had little influence on the global assessment due to their relatively late starts. • Were often ignored by their governments, especially in developing countries.
The published findings of the MA are widely	The summary for policymakers has been widely circulated. A web	A substantial effort was made to publish and distribute findings in printed and electronic format to key target audiences.

From Logical Framework in Project Document (2000)		Evaluation Findings (numbered paragraphs correspond to Verifiable Indicators)
Goals, Purpose, Outcomes	**Verifiable Indicators**	
distributed in print and electronic form and used by key target audiences	site is being widely used. Findings of the MA are being quoted in the media by researchers and by national ministries and international environmental conventions.	Products include an excellent web site (www.millenniumassessment.org); publications on the MA Conceptual Framework and the findings of the working groups (i.e., Conditions and Trends, Scenarios, Responses and SGAs); a summary report for decision makers (Our Human Planet); and a series of synthesis reports for specific audiences (i.e., biodiversity, desertification, wetlands, the private sector and human wellbeing). Products have also included the production and dissemination of CDs, booklets, posters and a video. Additional documents are still being generated from the SGAs. The quality and quantity of documents – 55 so far – is impressive, as is the editorial and translation work. MA findings are frequently quoted in the media (generally as an authoritative source that "things are getting worse"), by researchers and by national environment ministries in OECD countries (although the US Govt. appears to have largely ignored the MA). Significant penetration beyond relatively few researchers and environment ministries does not seem to have taken place in developing countries. While there are mixed reactions to the outputs, many users among the professional target audience find the materials "too academic". In some countries there are insufficient resources for interested potential users to either purchase the MA reports or to download the free but very large files from the MA web site. Many examples of uses of the MA outputs by key target audiences are captured in a March 2006 report prepared by the former Project Director and included as Annex 3. As noted by several respondents, the level of MA interest and activity has dropped since the main project outputs were distributed. The production of the major MA reports in 2005 coincided with the closing down of the MA Secretariat and the effective cessation of any new Project

From Logical Framework in Project Document (2000)		Evaluation Findings (numbered paragraphs correspond to Verifiable Indicators)
Goals, Purpose, Outcomes	**Verifiable Indicators**	
		initiatives. A significant opportunity for outreach and communications based on the MA outputs was therefore lost as the Project ran out of resources, having underestimated the time and budget required for publications.

B. Achievement of outputs and activities

19. The MA represents the considered findings of nearly 1400 scientists from around the world, who were asked to evaluate the state of knowledge in the trends and conditions of ecosystems and the services they provide, provide some indication of potential future conditions, and evaluate the successes and failures of possible policy responses. They produced a series of assessment publications, including the original intellectual framework, an overall synthesis document, four topical volumes, and a variety of special products for different audiences.

Reports

20. The key MA outputs have been as follows:

- *Ecosystems and Human Well-being: A Framework for Assessment* (2003). This book lays out the conceptual framework, i.e., the assumptions, processes and parameters used in the MA.
- *Ecosystems & Human Well-being: Synthesis* (2005). An overarching synthesis and interpretation of the MA findings.
- *Living Beyond Our Means: Natural Assets and Human Well-being* (2005). The Board of Directors' interpretation of the key messages to emerge from the assessment.
- Five additional synthesis reports: biodiversity, business, desertification, wetlands and human health (2005).
- Four MA technical volumes: current state and trends, scenarios, policy responses, multiscale assessments (2006).
- Individual reports on the 33 SGAs (since 2004 and continuing).

21. There is widespread agreement that these reports are of a very high professional standard and that everyone associate with their drafting, editing, reviewing, illustrating, translating and publishing have contributed to an excellent set of end products they should feel proud of and that are a credit to the Project. The MA Project was awarded the Zayed Prize for Environment in 2005, with the recognition that it was "one of the largest volunteer coordinated efforts in the history of international and interdisciplinary science".

22. The plans for documentary outputs of the MA have thus been met. All of these reports are available on the MA web site, thousands of copies of the syntheses have been distributed and the main reports are available from a publisher. Key reports are

being translated into the UN languages. Dissemination has been both good and expensive, although potential users in developing countries who lack fast internet connections and cannot afford to buy the reports, including some CBD COP national delegates, have had difficulty obtaining access.

23. Plans to produce and disseminate a variety of datasets, analytical tools and indicators have been partially met, although original hopes that the MA could produce a more quantitative baseline were eventually frustrated despite strenuous efforts from the secretariat and collaborating organizations. This is attributable more to continued difficulties with assembling globally-relevant environmental data than to any problem with Project planning or implementation.

Capacity Building

24. The assessment capabilities of many participating scientists were strengthened through the Project and several respondents intend to apply MA concepts in their future research. The interaction of scientists of different disciplines from all over the world carries an experiential value that is as important for capacity development as any formal training. A Project fellowship program benefited some 40 promising scientists who attended training workshops and working group meetings. The MA fellows program provided young scientists with experience of working alongside more experienced veterans and gave them outstanding opportunities to learn and network. There are indications that several younger scientists, nurtured in the formative MA milieu and exposed to leaders in their fields, are currently involved in projects directly arising from the MA process.

25. Although the MA process led to the establishment of new local, regional and global networks, it is difficult to assess capacity improvements or its effect on corresponding institutions (an explicit Project objective). In general there has been more awareness raising than actual capacity building in terms of acquiring new skills, etc.. The MA has strengthened the ability of national and local organizations to conduct assessments through pilot SGAs, although the Project has generally not strengthened the capacity of government agencies or personnel. Several respondents have suggested that potential users in government should be trained to use the MA information, which would need to be presented in simpler language in order to promote their use outside professional scientific or environmental circles.

Sub-global Assessments

26. The SGAs were a core component of the MA's multi-scale approach and were designed to meet needs of decision makers at the scale at which they were undertaken, strengthen the global findings with on-the-ground reality, and strengthen the local findings with global perspectives, data, and models.

27. The interest in and demand for SGAs far exceeded original expectations, demonstrating a very high level of interest in the MA approach among the global research community engaged in ecosystem-related work. There were eventually 18 MA-approved sub-global assessments, and an additional 15 with associated status. Many of these are still under implementation.

28. About $3.5 million in cash was earmarked for the SGAs in the original Project. This was envisioned as "seed money", with the expectation that the SGAs would be able to attract substantial additional funding. The SGAs generally had little success in fund raising, however, and most were underfinanced with the notable exception of SAfMA (Southern Africa), Western China and all of the SGAs in OECD countries. Many of the SGAs in developing countries were forced to use a lot of time and effort in fund raising that was not often very successful. The Project secretariat did a good job in encouraging and supporting the SGAs with the limited resources they had available. In these circumstances it is a credit to many of the SGAs that they have been able to make the progress they have.

29. Some of the SGAs catalyzed important initiatives. For example, the UN University supported a Rhodes University training program within SAfMA on integrated ecosystem assessment approaches attended by 21 African participants, including senior government officials. Rwanda and Uganda are now preparing their own courses and the Swedish International Biodiversity Programme has provided funding to develop guidelines for community assessments. The Northern Range SGA in Trinidad and Tobago has informed a new development policy from the Ministry of Planning, while CARSEA is supporting an inter-governmental process promoting an integrated management approach to the Caribbean Sea.

30. In some cases the effectiveness of the developing country SGAs was constrained by the limited capacities of the lead institutions. Virtually all of the SGAs were led by research groups, while government participation or support was limited and few SGAs made effective connections with or had clear influence on decision-making processes. A surprising number of national delegations to the CBD COP-8 appeared unaware of SGAs taking place in their countries. The technical quality of these assessments is widely recognized as variable and their timing meant that they had considerably less interaction with, and influence on, the global assessment than had originally been planned.

31. Despite the constraints, however, some respondents expect that the eventual outcomes of the SGAs may turn out to be the most innovative and influential outputs of the entire MA process. Capacity building among individual participants, the encouragement of multidisciplinary networks and broadened awareness of links between ecosystem services and human well-being were the most visible benefits of the SGAs.

Expectations

32. The innovative and ambitious nature of the MA contributed to mixed expectations. Our work suggests that the Project document and early reports tended to overstate the Project's potential impacts, and underestimate the time and resources needed to achieve these. It was not clear at the outset 'how far' the project would go, which was understandable given the context. However, this led to different expectations of the extent to which MA would influence policies and practices in governments and international agencies.

33. For example, the cover page of the project document stated that the MA would "synthesize scientific data and information…to meet the expressed needs of

policymakers and other users". The *"Ecosystems and Human-Well-Being: Summary for Decision Makers"*…presents the key findings…and meets the needs of policy makers, decision makers, and other professionals for a broad and coherent overview of assessment findings". The 'Problem Statement' section of the Project document anticipated that the MA would "strengthen the capacity of individuals and institutions to use the tools and information. This would provide the basis for key target audiences, including countries, regions and communities, to set and implement priorities for action". The project outcomes listed in the Project logical framework include a "methodology for integrated ecosystem assessments at the local, national and global scales" and published findings that would be distributed and "used by key target audiences". In the 'Results' section, the private sector would achieve "improved ability to forecast future supply and demand and evaluate business strategies", and civil society "improved access to information to hold private sector and governments accountable for decisions…because the goal of the MA is to improve environmental decisions around the world, there are countless potential indirect beneficiaries". Other anticipated results were that "the findings of the MA are adopted by the international environmental conventions and relevant regional, national and local authorities, NGOs or private companies…Datasets and analytical tools disseminated through the MA are widely used around the world". Some of these objectives now appear overambitious and inconsistent with the time and resources available, although they may reflect the kinds of ambition that needs to be shown to attract funding.

34. Some respondents working in conservation and development have questioned whether the MA is too top-down and academic in its orientation and whether it can meet their needs for practical outcomes. As anticipated by the mid-term evaluation, there does appear to be a disconnect between the stated user needs that the MA is responding to and expectations that the MA would deliver tools, methods, and technical products for practitioners and decision makers on the ground. Despite wide admiration for the MA conceptual framework publication, this is not and was not intended to be a user manual. As a result, there are doubts about the utility of the MA among government officials and conservation and development managers.

35. Discussions have been underway among the MA leadership on the possibility of developing tools and models from the MA that can more readily be applied by practitioners and decision makers, although the feasibility of this is unclear at present. Whether or not this idea comes to fruition, it does appear as if the Project and its partners have allowed a rather significant gap in expectations to arise.

C. Cost Effectiveness

36. The overall MA expenditures of $16.0 million are broken down in Table 2.1, showing that:

- Salaries, staff travel, administration and overhead costs of the secretariats cost $5.6 million.
- Over $6 million was used for international meetings.
- The total cost of the SGAs was less than $4 million, of which more than $1 million was used for meetings of the SGA working group. SAfMA received $0.8

million (including $0.4 million from the Government of Norway), while the other SGAs received about $1 million.
- Outreach expenditures were $2.4 million, consisting of $1.0 million in direct costs plus $1.4 million in allocated time and overhead costs of the secretariats.
- Publications and promotional materials used about $1.2 million in direct costs, plus $0.4 million in allocated time and overhead costs of the secretariats.

37. These figures do not capture the extraordinarily valuable voluntary contributions of the authors of the assessment reports, which were a core contribution to the main MA outputs, or of the MA Board, Assessment Panel and Working Group Co-Chairs. Many of these individuals dedicated substantial amounts of time to writing, discussing, reviewing and rewriting the various assessment volumes. While their travel costs to attend meetings were reimbursed, very few of these individuals received an honorarium. Many were under considerable pressure from their own institutions to reduce their commitments to the MA, but nevertheless persisted.

38. Could a global biodiversity assessment have been done less expensively? Yes, almost certainly. For example, smaller groups of experts might have produced comparable outputs in less time at less expense, reducing the need for expensive meetings, reducing the size of the secretariats and probably shortening the duration of the Project. However, such outputs would have lacked the legitimacy, authority and credibility that the MA obtained from the combined voluntary contributions of over 1,400 mainly independent scientists. It would also have been difficult to ensure that the best existing scientific and technical information and knowledge was used, a basic project objective. The level of credibility of the MA outputs has not been achieved previously by any comparable process in the biodiversity arena, including the 1995 Global Biodiversity Assessment as well as the first three versions of the Global Biodiversity Outlook.

39. The Project appears to comply with the GEF Incremental Cost (IC) requirement. The IC analysis in the Project Document appropriately highlighted the following in concluding that the Project was eligible for GEF funding: (i) the Project components complement rather than substitute for those baseline activities that can be identified; (ii) the SGAs represent a type of assessment not being conducted nationally or regionally; (iii) capacity-building aspects of the SGAs will strengthen the capacity to carry out these assessments; (iv) other benefits from the Project will largely be realized at a global or regional level; and (iv) the Project activities would not have taken place without GEF funding.

40. The costs of past and ongoing global assessment activities suggest that the MA budget was at least comparable to previous initiatives:
- IPCC 2nd Assessment Report (1995): $15 million cash + $15 million of in-kind support
- IPCC 3rd Assessment Report (2001): $15 million cash + $15 million of in-kind support
- Global International Waters Assessment (2005): $13 million
- Global Biodiversity Assessment (1995): $3 million
- FAO Forest Resource Assessment (1999): $17 million
- International Assessment of Agricultural Science and Technology for Development (2005-07): $11 million

41. In retrospect it is possible to question some of the allocations of budgetary resources:

- The prodigious amount of time and financial resources required to produce 11 reports (the Board Statement, five syntheses, four technical volumes, the Summary volume) and translate most of these into the five other official UN languages was underestimated.
- The SGAs were generally underfinanced, with the notable exceptions of SAfMA and Western China. The original expectation that modest amounts of seed money for each SGA would catalyze subsequent fundraising turned out to be misplaced. A significant amount of effort was devoted to fundraising by the proponents of the respective SGAs, yielding less successful results than had been anticipated.
- The resources for outreach and communications were essentially exhausted by the time that the major publications of the Project had become available.

Table 2.1 MA Project total Expenditures by Substantive Area (analysis supplied by UNEP)

	Condition	Scenarios	Responses	Sub-global	Publications	Engagement / Outreach	Panel / Cross-cut / Synthesis	Coordination / Board	Total
TSU and Co-chair Support									
TSU staff and post-docs	857,827	506,117	58,790	138,893	139,582	904,089	250,860	692,429	3,548,587
Administration and overhead	10,992	138,928	7,700	137,288	130,114	205,968	100,000	108,825	839,815
Co-chair support (excluding post-docs)	-	-	-	-	-	-	152,630	8,050	160,680
Staff travel	35,396	43,561	25,601	89,992	5,538	89,928	5,327	89,344	384,687
Rent, supplies, phone calls etc.	478	26,659	72,022	8,059	146,320	248,088	20,000	152,839	674,465
Staff training	-	-	-	-	-	-	-	-	-
Sub-total	**904,693**	**715,265**	**164,113**	**374,232**	**421,554**	**1,448,073**	**528,817**	**1,051,487**	**5,608,234**
Meeting Costs									
Meeting support (Meridian)	76,090	73,809	71,459	142,549	-	-	255,819	22,893	642,619
Working group meetings	721,575	714,673	771,071	1,115,152	-	-	487,772	100,000	3,910,243
Engagement and outreach events	-	-	-	-	-	260,488	-	-	260,488
Assessment panel and synthesis meetings	-	-	-	-	-	-	804,686	-	804,686
Fellows travel and scenarios training meetings	-	-	-	184,096	-	-	-	-	184,096
Board and Executive Committee meetings	-	-	-	-	-	-	-	270,263	270,263
Sub-total	**797,665**	**788,482**	**842,530**	**1,441,797**	**-**	**260,488**	**1,548,277**	**393,156**	**6,072,395**
Sub-contracts and Consultants									
Salary offsets	89,384	26,151	98,398	1,100	-	-	13,250	2,778	231,061
Data and indicators	382,892	-	-	-	-	-	-	-	382,892
Website design and server rental	-	-	-	-	75,205	71,046	-	-	146,251
Capacity building consultants	-	-	-	88,579	-	-	-	-	88,579
SAfMA	-	-	-	780,599	-	50,000	-	-	830,599
Sub-global seed funding	-	-	-	332,503	-	-	-	-	332,503
Sub-global linkage activities	-	-	-	84,990	-	-	-	-	84,990
Sub-global core funding (non-SAfMA)	-	-	-	650,764	-	-	-	-	650,764
Communications consultant	-	-	-	-	-	160,006	-	-	160,006
User forums	-	-	-	-	-	85,204	-	-	85,204
Scenarios modelling	-	219,846	-	-	-	-	-	-	219,846
Sub-total	**472,276**	**245,997**	**98,398**	**1,938,535**	**75,205**	**366,256**	**13,250**	**2,778**	**3,212,695**
Publications									
Contingency	62,339	-	-	4,394	-	-	-	25,746	92,479
Assessment and synthesis reports	1,879	1,415	15,000	-	738,995	90,895	-	-	848,184
Internet publications, website translations etc.	-	6,400	-	-	-	21,500	-	-	27,900
Promotional materials	-	-	-	-	969	199,268	-	-	200,237
Sub-global communications	-	-	-	22,733	-	-	-	-	22,733
Sub-total	**64,218**	**7,815**	**15,000**	**27,127**	**739,964**	**311,663**	**-**	**25,746**	**1,191,533**
TOTAL	**2,238,852**	**1,757,559**	**1,120,041**	**3,781,691**	**1,236,723**	**2,386,480**	**2,090,344**	**1,473,167**	**16,084,857**

- Significant resources were used to support international meetings of the working groups. In particular, the SGA working group used over $1 million for meetings. While the capacity to switch significant resources from international meetings to other main budgetary areas was probably limited, a significant number of participants have suggested that the MA process could have functioned equally well with fewer meetings.

42. There were delays in editing and clearing documents, partly because the review process was very meticulous. Additional time led to additional costs and delivery pressures. Activities that should have happened in sequence were instead implemented in parallel, somewhat reducing their combined value. Working groups and assessments were sometimes unable to build on each other's findings. The SGAs did not feed into the findings of the global assessments and only a few SGAs had been completed when the global assessments were printed. Such 'disconnects' have probably lowered the project's effectiveness, but were an inevitable result of the relatively brief project time frame.

43. The degree of consultation, review and feedback into the MA process was rigorous. For example, 40 scientists were invited to the First Technical Workshop where nominations were sought for authors and panel members. Adjustments to project design and management were considered well into implementation at the Second Technical Workshop, and budget revisions were made periodically. The Policy Response working group analyzed 78 different ecosystems service options. For the final round of chapter reviews for the global assessment reports and the first review of the SGA report, comments were requested from 1,766 'expert reviewers', 185 countries (through 600 national Focal Points) and 15 'Affiliated Scientific Organizations and National Academies of Sciences'. A total of 13,845 comments were received from individuals (including 540 'expert reviewers') and 46 countries. Although the project can be commended for encouraging high levels of participation and ownership, the committee meetings, extended reviews and continual deliberations used considerable time and resources. Validating "what was already known" is not an inexpensive exercise.

D. Financial Planning

44. Responding to the TOR:

1. The evaluation team has not received any indications that the financial controls, including reporting and planning, would not allow Project management to make informed decisions regarding the budget and allow for a proper and timely flow of funds.

2. UNEP provided the evaluation team with an analysis of expenditures incurred against donor funds, showing: (a) the expenditures for which UNEP has received audit reports, (b) the expenditures for which UNEP is awaiting audit reports, and (c) expenditures where an audit report is not required by UNEP. These analyses have not been included here and are available from UNEP.

   External audit reports received for the three sub-projects for which funds were channelled through UNEP have been reviewed. These audit reports all contained unqualified audit opinions: GF/MT/XG/FP/1010-01-76: executed by World Resources Institute; GF/MT/XG/FP/1010-01-83: executed by World Fish Centre; and GF/MT/XG/FP/1010-01-84 executed by Institute of Economic Growth.

3. Cofinancing amounts are shown and analyzed in Annex 2 prepared by UNEP. These data have been reviewed with UNEP staff, MA project staff and other partners, and there have been no indications that they are not accurate.

4. The Project was not closed at the time of the evaluation. One contract with WRI has been extended to December 31, 2006. All other contracts and sub-contracts have been closed. Additional expenditures anticipated under the WRI contract are as follows (data supplied by UNEP)[2]:

Sub-project GF/MT/XG/FP/1010-01-76: World Resources Institute (WRI)

Expenditure Category	US$
Project Personnel	6,780
Consultants	21,968
Administrative Support	14,176
Subcontract with World Fish Centre for remaining outreach activities	370,000
Premises	6,669
Sundry	407
Total	420,000

5. According to UNEP there are no outstanding financial reports apart from the audit reports noted in point 2 above.

6. An analysis of the Project budget versus actual cost is included in Annex 5. This has been reviewed with UNEP staff and Project staff.

[2] Official UNEP project revision. "The extension to the WRI sub-project is to allow completion of the final outreach and communication activities, including, translation into UN languages, production and distribution of an outreach kit on DVD; distribution of the MA reports; finalization of the MA website; coordination of outreach on the MA at various relevant meetings and events; and support to MA follow-on activities."

7. Project financial revisions are documented in Annex 5.

8. While the evaluation team was not requested to, and did not, carry out any financial audit procedures, there were no indications that the finances of the MA Project were not managed soundly.

E. Impact

45. Although it is too early to fully assess the impacts of the MA, preliminary impacts can be identified. In late 2005, the former MA Project Director surveyed the MA stakeholders, i.e., the authors, review editors, board and panel members, and convention national focal points, requesting input on the "use of the MA findings (global or sub-global) or of the adoption or application of the MA process or conceptual framework". The resulting report, "Millennium Ecosystem Assessment: Survey of Initial Impacts" is included here as Annex 3.

46. The evaluation team has studied this report carefully, have found it to be representative and balanced, and have found no significant inconsistencies between the report findings and the results of our own enquiries. An early draft of this report was available as the MA evaluation was being designed in detail, and a deliberate decision was made not to repeat this valuable survey, but rather to draw on its findings. The report summary is included in Box 2.1. One particularly notable MA impact since this report was issued has been the high degree of interest shown by the UK House of Commons.

Box 2.1. Extracts from 'Millennium Ecosystem Assessment: Survey of Initial Impacts' by Walter Reid (March 2006)

"[The survey] provides widespread evidence that the assessment is having an impact on the intended audiences but the extent of that impact is very mixed, with some institutions, regions, countries and sectors significantly influenced by the MA while others have not been influenced at all.

Specifically:

- *Conventions*: The MA has had a significant impact on the CBD and Ramsar. A significant amount of MA information and material has been utilized in decisions and recommendations taken by both of these conventions. There has been less impact on the CCD.
- *Regional, National and Sub-national governments*: Among governments, the impact of the MA appears to be greatest in regions and countries where MA SGAs were conducted, including the Caribbean, South Africa, China, Sweden and Norway, although significant impacts are also noted in regions and countries that did not undertake SGAs such as the European Union, UK and France. At a national level, there is little evidence of impact among several other economically and politically influential countries, including the USA, India, Japan and Brazil.
- *Business*: The MA findings were well received by business journalists but the impact to date in the business sector has been relatively limited. The most significant impact of the MA within business and industry is the incorporation of the concept of ecosystem services in the environmental policy issued by Goldman Sachs in November 2005. The World Business Council for Sustainable Development is also working with companies on MA follow-up activities.

- *Donors*: The MA has had a notable impact on the multilateral (particularly GEF) and bilateral (particularly Scandinavian) donors and to a lesser extent on foundations.
- *NGOs*: The MA has had a notable impact on international conservation-oriented NGOs but much less impact on national NGOs. To date there is no evidence of any impact on NGOs focused on development, poverty reduction or health issues.
- *International Agencies*: All of the UN agencies involved in the MA process (UNEP, UNDP, FAO, WHO and UNESCO) have incorporated the MA findings and process into their activities. There appears to have been no impact at all within the Bretton Woods institutions.
- *Capacity Building*: The MA SGAs and the MA fellows program were the primary mechanisms established by the MA to build assessment capacity and these were generally successful. A handful of additional training and capacity building activities have been established by partners and by experts involved in the MA.
- *Education*: MA materials are being used extensively in university courses and curricula. There is less evidence of use at other levels of education.
- *Scientific research*: The MA is having a notable impact on research directions and priorities."

Conceptual Framework

47. Key MA terminology such as multi-scale assessments, ecosystems services, tradeoffs and drivers of change appear to be becoming more visible in professional circles as well as in debates on conservation and development. MA concepts have already been adopted by some international environmental conventions (especially the CBD and Ramsar), research institutions and international NGOs (especially WRI and IUCN), although the persistence and eventual impacts of such changes are difficult to predict.

48. The MA conceptual framework is widely recognized as a genuine and important step forward. While biodiversity's role in maintaining ecosystem services that are vital to human wellbeing is conventional wisdom to conservation organizations and many scientists, the MA emphasis on these linkages appears to have been well received by some audiences who had not been convinced by traditional arguments for protecting endangered species and habitats.

49. Conservationists have been struggling to articulate coherent links between conservation and poverty mitigation, as reflected by biodiversity being virtually ignored in the influential Millennium Development Goals, and the MA could prove an important tool in helping address this issue.

Policy Development and Decision Making

50. While the MA has been well received by and had a positive impact on the CBD and Ramsar, two of the key targeted audiences, the international conventions face significant challenges in actually influencing the local and national decision making processes that determine the fate of biodiversity. The MA has had less impact on UNCCD or UNCMS and none on CITES.

51. A range of actors in international development (bilateral and multilateral agencies, NGOs, etc.) have been engaged in meetings and consultations on how to

build on the MA methodology and approach to provide guidebooks and other tools to help governments build national plans that properly integrate environmental dimensions. Several Western European government agencies have taken the MA very seriously, both as a potential source of guidance for their own national policies as well as shaping some of their international development assistance strategies. There are also signs of MA ideas and concepts being well received by certain business and local government communities, although it is not clear how this might be translated into concrete actions.

52. To date, the main impact has been conceptual, raising awareness on the importance of ecosystems services and their relation to human well-being, rather than affecting policies or environmental trends. This limited impact may be more the consequence of over-ambitious design with time and funding limitations rather than deficient performance. There are inherent difficulties in promoting complex innovative processes like the MA through short-term, delivery-based project modalities. The Project fell short of its original objectives in terms of the progress made in quantifying assessment data, valuing ecosystems services or systematizing SGA methodologies and 'best practices' into working models for policymakers.

53. The concepts developed by the MA break new ground and are being used by a growing number of organizations and individuals. Various texts from CBD meetings recognize the activities of the MA. Ramsar's 'wise use' approach is now based on ecosystems services. The consideration of ecosystems services and drivers has attained a higher profile within IUCN which "had thought about it for a long time, but the Millennium Assessment put it on the map". MA concepts and approaches have been built into the latest formulation of UNEP's GEO assessment. The MA conceptual framework is being discussed in international development cooperation in Scandinavia, although here the methodology is regarded as needing "more specificity in order to affect action and not just language". The French government has decided to support a consultative ecosystems assessment using elements of the MA approach.

54. While the MA conceptual framework is appreciated, the main gap between user expectations and project delivery has been methodological. The MA has developed general methodological guidelines, but not a product that can be readily used by planners or policymakers. Many respondents felt the project still needed to develop assessment methodologies and tools to assist development policy formulation and decision making. This includes greater specificity and quantitative application through valuation of ecosystem services and drivers, and more research on trade-off relationships. This perception is strongly felt among developing government representatives. Indeed, the level of MA 'ownership' among government stakeholders has been low, reflecting their limited participation in the MA's implementation and oversight. Their exclusion from these components of the MA process, while justifiable on technical grounds (for a project largely devoted to independent scientific research) has carried a high opportunity cost in terms of foregone ownership and policy impact. On the other hand, several MA participants expressed frustration that ongoing attempts to engage with government stakeholders during the assessment process had been largely fruitless.

55. The SGAs were allowed substantial methodological flexibility with the MA serving a facilitative role – offering technical guidance, sharing information,

organizing workshops and exchanges. This allowed recipient organizations to integrate MA activities within their ongoing programs and maximize ownership, as occurred with the Green Belt program of Sao Paulo: With only technical support from the MA, Sao Paulo's Forestry Department has launched a wide consultative process and is raising funds to conduct an ecosystems services assessment of the Green Belt forests that surround the city and provide water and clean air. The ecosystems assessment methodology developed under the Western China SGA has been adopted by the Academy of Sciences on a national scale. The MA gave credibility and prestige to other assessments, especially the crosscutting Tropical Forest Margins initiative which had a good fit with the MA framework. In San Pedro de Atacama, Chile the MA was used to encourage the mining companies to discuss water issues with local authorities, indigenous organizations, tourist operators and farmers, and to share information on water resources. Other examples are elaborated in Annex 3. While the SGAs were definitely driven by user demand, they also faced funding limitations and several rapidly lost momentum after the funding and MA support ended.

56. The full impact of the Project outreach and communications activities remains to be seen as some documents are still being printed and governments have not received them. Because efforts are focused on printed and electronic publications, countries that have not received them are unlikely to know about the project; this may explain why almost half of the developing country CBD-COP-8 delegation members contacted by the evaluation team had not heard of the MA, whilst others had heard about the MA and were anticipating the publications but could not afford to buy them and had difficulty in accessing them electronically.

F. Sustainability

57. Given the MA's unique nature and global scale, sustainability issues need to be looked at in a different light from more conventional projects. Since it is too early to fully assess the MA's impacts, assessing sustainability is even more problematic. Any discussion of sustainability must overlap significantly with the preceding discussion of long-term impacts.

58. Post-project sustainability issues were given limited attention in the Project document beyond the expectation that the MA would be repeated. This is understandable to the extent that the timelines involved (i.e. 10-15 years) are way beyond conventional donor commitment possibilities as well as outside the parameters of the project cycle. Similarly, the level of personal and institutional commitment needed to move the MA forward was probably not sustainable, at least in the short term.

59. As an innovative pilot initiative, the MA involved an incremental 'learning process' of testing, validation and learning that precluded a priori estimations of outcomes or future direction – quite simply, nobody really knew how far the process would go or where it would take them. As a result, the MA leadership generally assumed a 'wait and see' attitude before taking any decisions regarding continuity. While the limited attention given to institutionalizing the MA can be viewed critically in terms of not linking the MA process to more permanent recurrent initiatives such as

the GEO, it was understandable from a scientific perspective (and admirable in its honesty and lack of opportunism).

60. The MA now faces the difficult challenge of mainstreaming and/or institutionalizing its products and approaches, even as the diverse approaches used by the SGAs have yet to be systematically assessed. Moreover, the limited engagement of government stakeholders in the project's implementation and oversight has further limited opportunities for policy impact or institutional mainstreaming. As a result, the sustainability of MA activities is likely to be uneven - and the opportunities to improve this may be diminishing as time erodes momentum and institutional memories.

61. As other observers have noted, there is a general lack of clarity about what the various political actors and clienteles are actually being asked to do. For the most part, the scientific assessment part of the MA is all about defining what the issues are with respect to the status, trends, and sustainability of ecosystem services, and why various policy communities ought to care about the results. This step is necessary and enormously valuable, but it does not answer the question of what the various actors should then do about the findings and results.

62. The sustainability of impacts will undoubtedly be facilitated by the range of smaller, diverse follow-up activities planned by a variety of organizations mentioned in the body of this report and in Annex 3. Whether the MA will be repeated at some interval in order to track changes in the scientific understanding of ecosystem services is undecided at this point (various time periods of 5-15 years for a second version have been discussed). There are few signs that a full-scale repeat is likely. Two key constraints are financial resources and the exhaustion of many of the voluntary participants, although both of these barriers could conceivably be overcome by the passage of time. The sustainability of the MA is explored further in the chapter 3, the conclusions.

G. Stakeholder Participation

63. According to the Project document, the MA's global stakeholders included the parties to the international ecosystem-related conventions, secretariats of those conventions, UN agencies, other international bodies, and the scientific community. At the regional, national, and local level, stakeholders include Ministries of Environment, Agriculture, Water, Health, Planning, and Finance, local governments, private corporations, nongovernmental organizations and civil society. The media and the general public were also stakeholders even if they were not an immediate MA target audience.

64. Before the Project began, the MA design process involved extensive consultations with government delegations, scientific organizations, development agencies and other organizations through more than 20 workshops, meetings and other events. This appears to have been an exemplary preparation process from a stakeholder participation perspective. It was instrumental in promoting broad institutional endorsement and 'buy in' to the project, as reflected in the support statements that are attached to the Project document. The inclusive approach of the

design stage has been continued throughout the project's implementation. The MA was an open, transparent process, providing broad access to the information it collected, generated and used.

Multi-stakeholder Processes

65. The MA has engaged multi-stakeholder processes with conviction and enthusiasm under the leadership of a multi-stakeholder Board, as noted by the mid-term evaluation. The MA successfully recruited impressive individuals from key organizations to serve on its Board. These included high-level representatives of three major multilateral environmental treaties (CBD, CCD and Ramsar), UN agencies, donors, research organizations, civil society (through representatives of NGOs and indigenous groups) and the private sector. The mid-term evaluation correctly pointed out that nongovernmental and civil society Board members were appointed as individuals and did not actually represent their communities, hence their designation as 'members at large'.

66. Local and national stakeholders were significantly involved in the design and implementation of the SGAs. According to the Sub-Global Working Group, the MA "has been an important and highly motivating process that has brought together many people and institutions from around the world. It has provided us with a unique opportunity to exchange experiences across continents and cultures, develop innovative methodologies and help strengthen our capacity to assess the management of ecosystems for human well-being". While the evidence for cross-learning between the SGAs is limited, there was broad participation of local stakeholders in the SGAs visited by the evaluation team in Chile, South Africa and Trinidad and Tobago. National governments were a critical exception, however, and tended to be involved in the SGAs either marginally or not at all, despite repeated efforts by MA participants to encourage and their participation.

67. Recognizing the need to engage a broader range of stakeholders in developing countries, and especially in the countries not participating in an SGA, the MA launched a series of user fora from 2002, described as a "dialogues to engage with regional and national actors, institutions and processes". With support from various partners, the MA began to engage with government officials, civil society and indigenous organizations, universities, business associations and others in 25 countries in Latin America, Africa and Asia. These dialogues appear to have shown considerable promise in some countries but could not be continued or expanded at the desired level of intensity due to funding constraints.

68. The MA outputs have specifically emphasized the importance of stakeholder participation: "Increased transparency and accountability of government and private-sector performance on decisions that have an impact on ecosystems, including through greater involvement of concerned stakeholders in decision-making. Laws, policies, institutions, and markets that have been shaped through public participation in decision-making are more likely to be effective and perceived as just. Stakeholder participation also contributes to the decision-making process because it allows a better understanding of impacts and vulnerability, the distribution of costs and benefits associated with trade-offs, and the identification of a broader range of response

options that are available in a specific context. And stakeholder involvement and transparency of decision-making can increase accountability and reduce corruption"[3].

Contributors as Stakeholders

69. Many key MA authors and reviewers dedicated very substantial time and energy to the MA, often to an extent far in excess of anything they could have imagined when they first agreed to participate. In selecting these experts the Board and Secretariat were constantly challenged to achieve appropriate balance in gender, natural versus social scientists, and developed versus developing country participants. A relatively good balance was ultimately achieved, although the overall results are considered by many respondents to be skewed towards a Northern-oriented, Anglophone perspective. The level of participation in the global assessment of scientists from relatively large biodiversity-rich developing countries such as Brazil, China, India and Indonesia was disappointingly low (as well as some more affluent countries with significant biodiversity, such as Australia). The mid-term evaluation notes that many highly qualified individuals in developing countries work for institutions that do not have the resources to encourage or even allow their employees to volunteer their time on projects like the MA.

70. While there are diverse reactions from authors and reviewers to the functioning of the MA Working Groups, in general the participants do seem reasonably satisfied. The minutes of the numerous working group and committee meetings, indicate substantial dialogue and consultation in arriving at decisions, further confirmed by respondents to this evaluation. We concur with the mid-term evaluation that the devotion of a significant portion of the MA budget to workshops and meetings of the four Working Groups, the Assessment Panel, and the Board resulted in the engagement of a strong team of scientists within the MA with a shared vision and a mutual enthusiasm to produce of the key deliverables of the project.

71. Significant efforts were made to elicit feedback on technical report drafts from a wide range of stakeholders - government authorities, scientists, environmental practitioners, environmental organizations and development agencies. Comments were requested from 1,766 expert reviewers, 185 countries (involving 600 national focal points) and 15 scientific organizations as part of the review of global and sub-global assessment reports. Response rates were sometimes low, however. Thirty five countries responded to the first review round of the global assessments, with perhaps 12-15 of these including substantive comments. Strenuous efforts by the Secretariat did generate some additional responses. Such low response rates probably reflect the limited capacity of government environmental agencies to engage in the MA and not a lack of participation opportunities. The task of reading, let alone reviewing, thousands of technical pages was overwhelming for many environmental ministries, especially in non-English speaking countries.

National Governments

72. Although there have been encouraging signs of interest in the MA among OECD governments, with the exception of the USA and Japan, the MA is not well known

[3] MA Synthesis Report, p 20

among developing country governments. This is partly attributable to the decision to adopt a multi-stakeholder rather than an inter-governmental approach to the MA.

73. Another contributing factor is that the environment ministries who usually interact with UNEP as well as the international environmental conventions tend to be responsible for governmental participation in or responses to the MA. In developing countries these ministries tend to have modest capacities and limited influence. The former limited their ability to engage with the MA, while the latter makes it difficult for the MA to have a significant influence on local and national decisions affecting ecosystems and biodiversity, which tend to be made by the ministries responsible for planning, finance, agriculture, forestry, mining, etc., as well as by local governments.

74. Many developing country government officials we spoke to or reached through surveys were either unaware of the MA, regarded it to be of little relevance to their immediate needs or were unable to access it. This even applied to members of delegations to the CBD COP-8, particularly those from poorer, non-Anglophone countries.

Private Sector

75. The attempted inclusion of representatives from the business community differentiated the MA from most other scientific assessments. The Board made a deliberate and successful effort to encourage representatives of some very large corporations to participate, on the basis that increased knowledge about ecosystem services was a key ingredient in corporate strategies for sustainability. The World Business Council on Sustainable Development was also an active participant. This relative success at a Board level was not matched at an individual participant level, however. While some individuals from the private sector participated in some of the later Working Group sessions, they did not always find it easy to engage with the scientists and other experts already immersed in the process.

76. MA participants have highlighted the decision by Goldman Sachs to incorporate the concept of ecosystem services in its corporate environmental policy. Other concrete signs of change in the corporate world have remained elusive. As suggested in the mid-term evaluation, the private sector is very diverse and will need to be approached across its constituent parts, probably with special focus on the extractive industries.

Civil Society

77. MA engagement with civil society took place at the Board level (i.e., IUCN, WRI, indigenous people) and extensively within the individual SGAs. With the exception of IUCN, neither the large international conservation NGOs nor national NGOs were heavily involved in the global assessment, which seems unfortunate given their combination of relevant knowledge and implementation experience.

Other Stakeholders

78. In addition to national governments, some primary users of MA products have not been sufficiently engaged and are so far not reacting particularly favorably to the

MA's outputs. These include practitioners working at an operational level in the conservation and sustainable development communities (including government agencies, NGOs and international development agencies), natural resource managers, research managers and conservation biologists, and private sector entities directly involved in the exploitation of natural resources. Among these groups is a sense that the MA has not delivered the tools, methods, and technical products needed by practitioners and policymakers working on the ground in conservation programs and organizations.

H. Country Ownership

79. The Project is clearly relevant to national development and environmental agendas, however, and to supporting the effective implementation of ecosystem-related conventions and resource management. The Project can be described as country driven insofar as it was requested collectively by the member states of the CBD.

80. As explained elsewhere, however, country ownership of the MA and its outputs by individual national governments has been limited, especially among developing countries, and there is little sign so far of the MA having led to any changes in national policies or decision making involving ecosystem conservation and management.

81. As noted by the mid-term evaluation, the MA's bottom-up process of identifying, organizing, and conducting SGAs offers considerable potential to translate the MA's goals – integrated assessment of ecosystem goods and services – into practical action and concrete decisions. In general this does not seem likely at present, largely because of the lack of government-level policy and decision makers participating in, or even being aware of, the SGAs. Nevertheless, in certain cases, for example in Trinidad and Tobago as well as South Africa, there are clear indications that the SGAs have informed national and local biodiversity and other environmental planning initiatives.

I. Implementation Approach

82. This section assesses the development and effectiveness of the Project's governance and management arrangements.

Origins[4]

83. The idea for the MA came from the scientific community and from delegates involved in the CBD, the CCD and Ramsar, each of which had significant unmet needs for information on ecosystem change and impacts on human well-being. Scientists also recognized the need for a mechanism to provide decision-makers with up-to-date information on scientific findings related to ecosystems and biodiversity.

[4] This section draws on information on the MA web site, verified by the evaluation team.

84. The specific proposal for the MA arose during a 1998 meeting on the biennial World Resources Report published by UNDP, UNEP, World Bank and WRI. This meeting concluded with a proposal to undertake a set of activities to create a new international assessment process, including: (i) conducting a Pilot Analysis of Global Ecosystems, (ii) focusing the 2000-2001 World Resources Report on the condition of global ecosystems; and (iii) establishing a consultative process that could lead to the creation of a full international science assessment.

85. The MA concept was developed further by an Exploratory Steering Committee which established governance and institutional arrangements, then approved the proposal submitted to the GEF, UNF and other donors. As part of the exploratory process, WRI and others conducted a Pilot Assessment of Global Ecosystems. In October 1999, the Committee concluded that the assessment process should be launched. During 1999 and 2000, the CBD, the CCD and Ramsar all took decisions supporting the establishment of the MA. During 2000 the first meeting of the MA Board took place and the UN Secretary General featured the MA as one of five major initiatives for "Sustaining our Future" in his Millennium Report to the UN General Assembly. Following the receipt of core funding, the MA began in early 2001.

Implementation Timeline

86. The first year effort focused mainly on designing the methodology for the global and sub-global assessments. The main assessment work, including the drafting of technical reports by the MA working groups, was carried out in the second and third years. This was followed by two rounds of review of the draft reports by experts and governments in 2004. The assessment findings were formally approved by the Board on March 23, 2005. Some of the SGAs were initiated after 2002 and are still being completed.

Governance and Management Arrangements

87. Board members were selected to represent key users of the MA findings. The Board included representatives of the CBD, CCD, Ramsar, national governments, UN agencies, civil society representatives (including indigenous peoples) and the private sector. Board members representing institutions were selected by those institutions. In addition, 10 "at-large" members were selected by the Steering Committee and an additional 10 members were chosen by the Board at its first meeting. Additional members were added by the Board over time.

Organization of Technical Work

88. The MA was undertaken by an international network of scientists and other experts, with a process modeled on the IPCC. More than 1300 authors from 95 countries were involved in the MA, organized into 4 working groups. Three of these working groups (Condition & Trends, Scenarios, and Responses) carried out the global assessment component of the MA. The fourth working group (Sub-global) involved the SGAs. The working groups involved both natural and social scientists. An Assessment Panel, comprising the co-chairs of the working groups and a few additional scientific experts, oversaw the technical execution of the assessment work.

89. To ensure accuracy and scientific integrity, the MA's technical volumes each underwent two rounds of review by experts and governments, coordinated by the Technical Support Units (TSUs), making up the distributed secretariat. Together with 44 governments and 9 affiliated scientific organizations, over 600 individual reviewers worldwide provided around 18,000 individual comments. The review process was overseen by an independent Board of Review Editors, composed of Chapter Review Editors who ensured that all review comments were adequately handled and responded to by MA authors.

90. UNEP provided overall coordination, specifically through the administration of more than half of the core financial support and by employing the MA Director as a UNEP staff member. Each working group was supported by a TSU to help coordinate the network of people involved. The TSUs and the Director's office formed a distributed secretariat across a network of co-executing agencies that managed logistical, administrative and technical support for the working groups and committees involved in the assessment[5]. The Project Director and Board were supported throughout by the Meridian Institute which facilitated the design and implementation of the engagement and outreach strategy, and provided facilitation and logistical support for meetings throughout the world.

Assessment

91. The MA's organizational and institutional arrangements were very effective in generating momentum and commitment, building consensus and validating outputs. The ability of the project to coordinate the scale of participation among scientists, research institutions, environmental organizations and development agencies was in itself an indicator of capacity. This was attributable to design as well as individual and institutional performance. The project governance structure drew from the experience of the IPCC among others, and enabled relatively smooth implementation of a very large and complex global initiative. The interactive organizational structure - linking the MA Board, Assessment Panel, thematic Working Groups, committees and members-at-large - was led by a very competent and hard-working core team that devoted considerable effort to the Project's success. The decision to enlist renowned scientists, environmental activists and other 'champions' as MA members raised the project's credibility, prestige and ability to mobilize external support. The facilitative and delegating role played by UNEP was decisive to encourage shared commitment and ownership.

92. The political consultations held in advance of the decision to proceed with the MA proved to be extremely important in obtaining support for the project. Between March 1999 and December 2000 more than 20 workshops, meetings and promotional events were organized to gather input. The scope of these consultations is reflected in

[5] The MA Director's office was based in Malaysia at the World Fish Center, as was the TSU for the Sub-Global Working Group. WCMC (part of UNEP) hosted the TSU for the Condition and Trends Working Group, and SCOPE supported the Scenarios Working Group (a joint activity of the MA and SCOPE.) The Institute of Economic Growth in Delhi supported the Responses Working Group. WRI in partnership with the Meridian Institute supported the MA's outreach and engagement activities, and coordinated the publications process.

the support statements by governments and organizations[6]. Complementing these political consultations, the technical preparations orchestrated by WRI and its partners in advance of the MA also made a significant contribution in setting the stage for the Project to begin.

93. Following broad consultations, the originating organizations decided that the MA should not be an official inter-governmental process. However, applying a key lesson from the 1995 GBA, national government buy-in for the MA was obtained through the international environmental conventions that requested and supported the MA. It was considered that conducting the MA as an inter-governmental process would have unduly slowed the process and also made it difficult to elicit the active, voluntary participation of so many distinguished independent scientists and experts, which was viewed as critical to ensuring the MA's credibility and authoritativeness. The disadvantage of proceeding without an inter-governmental process became apparent during implementation, as many governments and regional inter-governmental structures failed to maintain contact with the process, despite evidence of repeated attempts by MA participants to achieve this. This lack of national government engagement with the MA, particularly in developing countries, compounded by the truncated Project outreach and communications effort were a significant weakness of the MA process.

94. The MA had an innovative governance structure that was representative of not only scientists and experts, but also UN conventions, civil society groups, and indigenous peoples. The MA Board, the Assessment Panel, and Working Groups were co-chaired by representatives of both developed and developing worlds. These choices added significantly to the credibility of the MA.

95. The governance and management arrangements for the MA drew effectively and judiciously on the best practice example of the IPCC. As noted by the mid-term evaluation, the MA has adopted the IPCC's working group organizational structure and rules for writing and peer review, which have generally worked well. Although the MA has built strongly on the model of the IPCC, adapting many of its procedures and processes, it has also innovated in new and important ways: (i) adopting multi-stakeholder governance, engagement, and outreach; (ii) working with a multi-scale approach including, especially, bottom-up, sub-global assessments; (iii) incorporating local knowledge; and (iv) extending and expanding the idea of a distributed secretariat. All of these are important steps forward in the design of international scientific assessments. Several of these innovations were adopted by the subsequent International Assessment of Agricultural Science and Technology for Development.

96. The Board and the Assessment Panel were broadly representative bodies that attracted well-balanced groups of distinguished members and generally worked well. The Board did a good job in providing strategic leadership to the MA participants and direction to the Secretariat. Not surprisingly, some Board members participated more actively than others. Some observers consider that the Board became so large that its effectiveness was compromised.

97. The Board, the Assessment Panel and the Working Group Co-chairs deserve

[6] See Annexes X111 and XV of the MA Project document.

particular credit for focusing the MA on the link between ecosystem services, human well being and poverty mitigation, and then keeping it focused. This was a considerable challenge as the often independent, strong-minded scientists and experts involved did not begin their MA work as an identifiable, let alone cohesive, community and only a few of them had significant assessment experience. Some were initially critical of the strong link between what they perceived as 'hard' ecosystem science and 'soft' social issues, but even some of the most cynical have indicated that they too gained new insights from the MA process. The Board played also a major role in assuring quality control for the MA outputs, a very time-consuming but critically-important process.

98. The fact that the MA was actually implemented to its current state without major mishaps is a managerial and logistical achievement in itself. The demands generated by a project of this scale and complexity are considerable: Designing and testing methodologies; coordinating the implementation of various sub-global assessments; editing and translating a substantial volume of reports; coordinating the activities of different working groups with the participation of more than 1,400 scientists from 95 countries; conducting outreach and public relations activities; managing funds from various sources; and attending a continuous administrative and reporting requirements. Networking and coordination arrangements, while cumbersome and costly, were largely effective in meeting the needs of the project, participating institutions and recipients. The MA Board and Project Director deserve considerable credit for their ability to address these challenges and sustain momentum.

99. It became apparent relatively early in the Project that additional financial resources would be required for outreach and communications, and that the expected flow of additional funding for the SGAs was unlikely to materialize on the scale anticipated. Beyond the considerable efforts of the Secretariat, however, relatively little effective fundraising was carried out by the Board, UNEP or the other key partners.

100. The high quality of the role played by the Secretariat under the excellent leadership of the MA Director was one of the most outstandingly successful aspects of the Project. MA partners and participants have universally praised their efforts, and the evaluation team has been extremely impressed at the way in which this very complex enterprise was kept on track while emerging challenges were addressed in a diplomatic, responsive and intelligent manner. The commitment and effectiveness of the MA secretariat made a major contribution to the momentum and ultimate achievements of the MA process.

101. The dispersed Secretariat seems to have worked well, administratively and politically. As noted by the mid-term evaluation, the MA Secretariat staff could probably have benefited from being centrally based. However, the dispersed Secretariat had significant benefits, especially: (i) building capacity in project management and administration among the co-executing institutions; and (ii) promoting an image of the MA as a global and culturally diverse initiative.

102. UNEP's role as a relatively hands-off coordinator of an autonomous MA Secretariat also appears to have worked well, encouraging the substantive participation of environmental organizations, research institutes and scientists on a

global scale, and the agency deserves considerable credit for this. In this respect, the project approach - its implementation strategy, coordination arrangements and devolution of responsibility -generated a unique experience of cooperation between participants around the world. It is understood that UNEP initially would have preferred a more active role in managing the MA in-house, although the almost unanimous view of the respondents to the evaluation is that this would not have helped the Project. The replicability of this management model for future UNEP-led assessments is difficult to assess, largely because the MA Secretariat, and in particular the MA Director, were so extraordinarily effective in their tasks; as a result, UNEP's supervision capacity and ability to respond to problems and challenges arising during implementation was not fully tested.

103. The level and depth of interaction stand out in particular – between scientists and professionals of different disciplines and countries, among organizations, the voluntary commitment of so many participants, etc. This is a credit to the project's governance arrangements as well as a forthcoming management style that encouraged participation.

J. Replicability

104. Replicability issues are covered in the sections on Impacts and Sustainability.

K. Monitoring and Evaluation

105. The MA itself is a contribution to monitoring the state of the world's ecosystems, and has contributed to UNEP's goal of a strengthened environmental monitoring and assessment capability within the UN system.

106. According to the Project document, monitoring of the MA Project would consist of: (i) quarterly and half-yearly reports on substantive and financial matters; (ii) a mid-term internal evaluation undertaken under the supervision of the MA Board to diagnose problems and suggest necessary corrections; (iii) a final desk evaluation undertaken by UNEP; and (iv) A post facto in depth evaluation will be conducted, under the supervision of UNEP and the GEF Monitoring and Evaluation Unit two years after the completion of the project. In practice UNEP has replaced steps (iii) and (iv) with this evaluation.

107. Monitoring and evaluation was a challenging task given the MA's scale and complexity, yet was adequately addressed, contributing to the project's effective implementation. The mid-term evaluation was carried out as planned, with detailed responses prepared to each of the recommendations, all of which were considered by the MA Board.

108. Attention was given to M&E through exhaustive reviews of assessment findings and draft reports; periodic meetings of the Executive, Budget and Oversight committees to discuss progress and adjust work plans, and the general interest of the core team in achieving quality. The reports of Executive Committee meetings convey detailed and in-depth discussions on implementation and delivery issues. The MA

Board, noting the project's ambitious scope at an early meeting, asked the Assessment Panel "…to pay close attention to the feasibility of completing material in the outlines during the course of the work, carefully assess progress as the work progresses, and consult with the Board if concerns arise regarding the ability to address the full scope of the assessment"[7].

109. Most of the significant issues and challenges that emerged during project implementation, which are described and discussed elsewhere, were either due to strategic decisions made in advance or a lack of resources. As a result they could not easily be addressed by the Project leadership or the supervising UNEP task manager. More routine issues were handled effectively by the Project personnel.

[7] Minutes of January 2002 MA Board meeting.

3: Conclusions, Recommendations and Lessons

Overview

110. The objective of the MA was to assess the consequences of ecosystem change for human well-being and the scientific basis for actions needed to enhance the conservation and sustainable use of those systems and their contributions to human well-being. The MA consisted of an assessment of ecosystem services both at a global level and at a sub-global level through local, national and regional studies, the SGAs. The MA did not aim to generate new primary knowledge but to engage the scientific community to add value to existing information by synthesizing and communicating it in a useful form.

111. The MA was designed to improve the management of ecosystems and their contributions to human development by helping to bring the best available information to policy and management decision makers. The stated intention was to provide information and strengthen capacity but not to set goals or to advocate specific policies or practices (i.e., to be "policy relevant but not policy prescriptive"). Primary users were intended to be the international ecosystem-related conventions (who had requested the assessment), regional institutions, UN agencies, national governments, civil society and the private sector.

112. The MA built on lessons from earlier international environmental assessments, particularly those undertaken by the IPCC, the UNEP Global Biodiversity Assessment and the UNEP Global Environmental Outlook, and built on the World Resources reports published by WRI, UNDP, UNEP and the World Bank.

113. The MA Project was coordinated by UNEP in partnership with other agencies. A Board was appointed to govern the Project, while an Assessment Panel oversaw technical and scientific Working Groups covering four areas: conditions, responses, scenarios and the SGAs. The Project secretariat was spread over seven collaborating agencies, with the Project Director based at the World Fish Centre in Malaysia.

114. The original project budget was US$ 20.8 million plus $4 million project development funding. $7.0 million was provided by the GEF through UNEP, $4.2 million by UNF, $2.4 million by the Packard Foundation, $1.5 million by the World Bank and $0.8 million by UNEP. In-kind contributions were $7.3 million. Originally planned to run for four years to March 2005, the project was extended by 6 months to September 2005. Certain activities related to the translation, printing and distribution of technical reports were continuing as of mid 2006, with completion expected later in 2006.

Overall Findings

115. The MA was a highly complex and challenging project to design and implement on a global scale. There are many important positive aspects to the Project as well as some weaknesses. Most of the weaknesses are attributable either to strategic choices made during the Project design phase or to resource and time constraints that emerged during implementation. Project implementation and management was generally very effective. While it is too early to assess the impacts of the Project, the progress made

towards most of the Project's major objectives and intended outcomes can be assessed:

Preparation and Design

116. High quality preliminary work under an Exploratory Steering Committee set the direction and engaged reasonably broad support for the MA, which originated in civil society and was transferred to the UN system. The Project wisely drew on available lessons from previous assessments, including adapting approaches tested through the IPCC process, avoiding the lack of political buy-in that constrained the Global Biodiversity Assessment and engaging with a broader range of independent experts than the early versions of the Global Environmental Outlook.

117. The decision to set the MA's technical objective as assessing the capacity of natural systems to support humanity proved both innovative and far sighted. Engaging the global scientific community to address this issue was critical to ensuring that the findings would be authoritative and credible. The design of the Project was validated by a wide range of stakeholders and supported by a complex array of donors and other partners, thus providing a strong consensus on rationale and approach as the MA was launched.

118. A key decision was *not* to carry out the MA through an official inter-governmental process (although care was taken to ensure support was in place from three key environmental conventions which national governments are parties to: the CBD, CCD and Ramsar). This helped the Project engage more than 1,400 scientists and experts to carry out the assessment, virtually all of whom worked on a voluntary basis. This extraordinary contribution from the scientific community owed a considerable debt to the independence of the MA as well as the stature of the MA leaders and their ability to engage peers around the world. Such broad participation would have been unlikely under an inter-governmental process, where participants would have more skeptical about political independence. Other benefits from working outside an inter-governmental process were the opportunities to engage private sector and civil society organizations in key decision-making roles on the MA Board, as well as greater autonomy and flexibility for the Project. Some important disadvantages from working outside an inter-governmental process included (i) a significant lack of awareness or engagement by political actors in both developed and developing countries, and (ii) a contribution to the present uncertainty over what should happen next, now that the MA has been completed.

Major Achievements

119. The Project has achieved some clear successes:

- The MA has produced a series of credible, authoritative and high quality reports, with a very considerable volume of material well packaged for different audiences at varying levels of complexity. All of the outputs have been extensively and rigorously peer reviewed, itself a remarkable achievement for publications on this scale. Beyond the main technical reports, the Board Statement, the Synthesis for Decision Makers and the other syntheses are especially valuable for a broader audience. These very professional documents are illustrated with high quality

graphics that help convey a series of findings that are often of challenging complexity. All of these products are available electronically at the excellent MA web site. For those who can access them, this set of materials will provide an authoritative and influential resource for research, teaching and conservation planning. The demanding process of drafting, reviewing, editing, synthesizing, publishing and in some cases translating this massive body of material eventually required considerably more time and financial resources than had originally been planned.

- The MA emphasis on ecosystem services and their significance for human well-being is widely recognized as having made a major contribution to linking biodiversity conservation with poverty mitigation, the absence of which has frustrated the conservation community since the Millennium Development Goals – which virtually ignored biodiversity and ecosystems – were agreed and became a major priority for international development assistance. The MA emphasis on exploring trade-offs has also been welcomed as a more realistic basis for analysis and policy than the prevailing focus on 'win-win' solutions for conservation and development.

- The MA Conceptual Framework is widely regarded as an innovative and excellent technical analysis that seems likely to have a significant impact on the direction and approach of future applied research, which in turn may lead to more effective ecosystem management decisions and policies. It is important to note, however, that the Conceptual Framework is not a how-to, operational manual and was not intended as such.

- The MA responded to and has successfully engaged the secretariats of the CBD and Ramsar. A significant amount of MA information and material has been utilized in decisions and recommendations taken by both of these conventions, whose immediate future work programs seem likely to be significantly influenced by the MA.

- The level of interest in carrying out SGAs as well as the number of SGAs actually undertaken (34) far exceeded expectations, demonstrating a clear global interest among researchers in assessing ecosystem services and tradeoffs on multiple spatial scales. Many of these SGAs are still continuing. The very few SGAs in developing countries that were adequately funded did make good progress and some have already catalyzed follow-up initiatives.

- The MA not only engaged a vast number of biodiversity scientists and experts, but also led to the emergence of a genuine global community for multi-scale ecosystem assessment that had not existed previously. This was a considerable achievement given the initial lack of assessment experience among this diverse group of individuals more used to hypothesis testing than synthesizing best-available information and knowledge. This wider MA community is now a remarkable human resource for future biodiversity initiatives.

- Although difficult to measure, the Project's capacity building goals appear to have been largely met. The most impressive aspects were (i) the excellent Fellows Program that provided accelerated learning experiences to promising young

researchers, and (ii) the learning-through-doing opportunities given to the many individuals who participated in the multidisciplinary teams carrying out the SGAs.

- The MA and its implications are being discussed by various OECD government agencies, especially in Western Europe, and may be adopted in various forms either within their own countries or in connection with their international development assistance programs. The MA seems likely to have an impact on future GEF programming, most immediately in forming strategies to combat land degradation, and has been particularly welcomed by UNDP at a policy level.

- Exceptionally able leadership was provided by the Project Director, with strong support from both the Board and the secretariat staff. Apart from maintaining the highest professional and technical standards, Project management showed outstanding strategic and diplomatic skills in engaging successfully with a very diverse set of stakeholders (including the conventions, the scientific community, civil society, governments, intergovernmental institutions, UN agencies, private sector firms and others). As a result there was substantial overall support for the MA despite persistent concerns among some stakeholders that their priority needs might not be addressed.

- All of these factors have contributed to keeping biodiversity conservation and ecosystem management on the international policy agenda.

Weaknesses

120. The Project's successes are mitigated by some significant weaknesses:

- There is little evidence so far that the MA has had a significant direct impact on policy formulation and decision making, especially in developing countries. While the CBD and Ramsar appear satisfied with the results, the key decisions affecting biodiversity conservation and ecosystem management are usually not taken by international conventions. Rather, they are taken at local and national levels by governments and other local and national stakeholders. In this context, the level of awareness of the MA among many developing country governments appears relatively low. Even in those countries and regions where SGAs were undertaken, there are limited signs of decision makers having been involved in or influenced by the MA process or outputs. It does seem likely that at least some OECD country international development assistance programs will be influenced by the MA, however, and there has been some uptake by the GEF, by UNDP and by IUCN, although little by World Bank. Reaching developing country governments with the MA messages through such organizations' support for conservation and development programs may be the most promising route at present.

- The Project objectives call for the assessment results to be used in management and policy decisions at different scales and anticipate the development of 'implementation strategies'. It is not clear that this was a realistic goal for a Project of this nature in a relatively brief 4-year time span. There are at least two problems with these objectives: (i) the very policy and decision makers who are being expected to act on the MA findings were not a part of the assessment process, which was primarily a scientific undertaking; and (ii) the MA has not

produced tools, models or methods that can readily be applied by practitioners in the field or by people working at operational levels in conservation and development organizations. It is therefore not surprising that these objectives have not been met, although we fully appreciate the pressures on project proponents to include ambitious objectives in their plans.

- The MA explicitly set out to be relevant to policy but not to set targets or limits, probably because there is limited consensus on viable targets in biodiversity conservation and ecosystem management, and because setting targets would have involved a complex political dialogue and process that could have distracted and would almost certainly have delayed the independent scientific assessment process. However, the lack of specific policy guidance in the MA (there is a lot of general policy guidance, little of which is new) has contributed to considerable uncertainty on what should happen next and who is supposed to do what with the MA findings, questions that could have received more systematic attention from the sponsoring organizations during project planning and implementation.

- While communication and outreach *during* the assessment was strong and managed to raise considerable expectations among different audiences, it was recognized at a fairly early stage of Project implementation that adequate financial resources would not be available for communications and outreach *after* the assessment's major products were released starting in 2005. Despite strenuous fundraising efforts from the Project leadership, the unfortunate situation developed that the Secretariat closed down and the budget was exhausted just as the MA's key reports became available. There has been a significant loss of momentum as a result and the subsequent communications and outreach effort has not been on the same high level of performance as the rest of the Project implementation. In retrospect, a reallocation of budgetary resources away from international meetings and towards post-publication outreach could have been warranted.

- The SGAs were a key element of the Project's multi-scale approach, although they were only allocated $1 million in the core Project budget. While it was anticipated that initial seed funding from the Project would allow the SGAs to readily locate their own funding, very few of the developing country SGAs were able to raise adequate funds. Most were severely constrained by a lack of resources and the quality of the SGA products has been variable. Many SGAs are still under way. Most were unable to connect effectively with the global assessment, mainly because they ran parallel to, or sometimes far behind, the other assessment activities. While these constraints were a result of insufficient time and limited resources, it is also clear that relatively few of the SGAs engaged with local or national decision makers, and governments' awareness of SGAs in their own countries seems surprisingly low. Overall views on the SGAs are diverse: some MA participants and stakeholders consider them to have been an unnecessary and unproductive distraction from the global assessment, while others expect them to eventually generate the most significant long-term MA results and impacts.

- One year after the Project's major outputs started to become available, it is not clear what, if anything, should happen next. To some extent a 'wait and see'

approach is understandable as the Project sponsors and leaders could not be sure how the MA results would be received. Continuity and follow up received little attention in the Project document, which "expected" the MA to continue over 5-10 year intervals on the basis that if "the assessment is highly valued by the users then there will be little difficulty in obtaining the financial resources and scientific community participation to repeat the process". This seems unlikely at present as there seems limited interest beyond the MA leadership in an exact repeat. While there have been protracted discussions over the possibility of a GEF medium-sized project (<$1 million), so far there appears to have been little systematic consideration of the options for following up on the MA, including the questions of who, where, when, with what resources and, of course, why. This issue is discussed further below.

- The objectives, outcomes and initial expectations of the MA were probably too ambitious for a four-year project, even allowing for a six month extension. It is only due to exceptionally able management and the extraordinary contributions of many dedicated Board members, secretariat staff, authors, editors and reviewers that the Project achieved what it did. Due to funding and delivery pressures, many components were implemented in parallel instead of sequentially, then subsequently retrofitted. Taking on such ambitious objectives raised rather unrealistic expectations among certain target audiences whose perceptions of the MA's actual achievements have become negative, including those who feel the MA either 'tells us what we already knew' or is an expensive and unnecessary compilation of available information with little practical application.

Role of UNEP

121. UNEP was the GEF implementing agency and provided overall coordination for the MA Project. The agency played a relatively hands-off role, leaving the project leadership and secretariat to be relatively autonomous. It is understood that UNEP initially would have preferred a more active role in managing the MA in-house, although the almost unanimous view of the respondents to the evaluation is that this would not have helped the Project. In practice the approach adopted appears to have worked well and UNEP deserves considerable credit for adopting more of a partnership than an oversight role and avoiding micro-management of the Project.

122. The replicability of this management model for future UNEP-led assessments is difficult to assess, largely because the MA Project leaders were so effective; as a result, UNEP's supervision capacity and ability to respond to problems and challenges arising during implementation was not fully tested. Nether UNEP nor the other main Project sponsors appear to have taken any specific action to address the major weaknesses identified in the Project, however, and UNEP has not shared any analyses of options for following up or sustaining the benefits from the MA.

123. UNEP has moved ahead and internalized some key elements of the MA approach into its own GEO process, a periodic report to governments through the UNEP Governing Council. As a result, the forthcoming GEO-4 report appears to have the potential to be more influential than its predecessors.

124. UNEP staff, especially from DEWA, were involved in the partnership of organizations that planned the MA Project and then played a full and constructive role on the MA Board. Technical staff inputs from UNEP to the MA process were relatively limited, however. This appears to represent a missed capacity-building opportunity for the agency and its staff. While this evaluation made no attempt to assess UNEP's capacities beyond the management of the MA Project, our respondents collectively expressed little confidence in UNEP's current capacity to deliver a credible, authoritative, independent global scientific assessment through an in-house effort.

Worthwhile Use of Funds?

125. Was the MA worth undertaking with a total investment of $20 million, including $7 million from GEF? Partly this depends on what else could have been done with the funds. Twenty GEF medium-sized projects at $1 million or one full-size project might have been alternatives. A categorical answer on the value of the MA Project is impossible to provide, as a lot depends on what happens next in terms of the MA's influence and impacts. Some of these impacts will happen spontaneously as more people and organizations become aware of the findings, some will happen through individual promotion or use of the MA by the many participants familiar with the process, and some will depend on so far unspecified plans to follow-up or possibly repeat the MA in some form.

126. At this point it seems that the MA will be more successful in influencing research agendas than in influencing public policy agendas, although at least some international conservation and development programs do seem likely to be influenced. A lot will depend on whether the links that the MA has highlighted between ecosystem management and human well-being are translated into tangible projects and programs.

127. Although the generally low ownership levels among developing country governments has weakened the MA's potential in terms of policy impact and sustainability, this may have been a necessary trade-off or risk. While formal government participation within the MA process might have increased national ownership and engagement in principle, such an arrangement could have proved premature – and possibly counterproductive – for a project that was largely based on independent science. The formality and procedures associated with inter-governmental representation might well have weakened the project's autonomy and ability to advance independently in its research, and possibly discouraged the commitment of scientific institutions and NGOs that were vital contributors to the MA's progress. It is arguable that, as an evolving process, the MA first needed to consolidate and synthesize a critical mass of information and knowledge before formal government representation would be feasible and generate added value.

128. The shortcomings documented here should not diminish the overall Project performance and the immense effort by many partners that went into moving this complex initiative forwards. As an innovative and largely unprecedented undertaking, the MA faced considerable uncertainty regarding how far the process could be taken or the level of impact generated, neither of which could be reliably predicted in advance. As discussed, this led to some inconsistent and at times over-optimistic

expectations that have not been satisfied in practice. The project cycle itself is probably an obstacle for experimental initiatives such the MA, which are incremental in nature and probably require nurturing beyond the standard project term. In retrospect the MA might have required 7-10 years to fulfill its potential, although whether some of the exhausted participants could have continued that long is questionable.

Overall Assessment

129. The evaluation TOR requires the success of project implementation to be assessed and rated on a scale from 'highly satisfactory' to 'highly unsatisfactory' in eleven different categories. The results are shown in the table below. This table contains very brief summary comments on points made in this report and should be read in conjunction with the entire report.

Criterion	Evaluator's Summary Comments	Evaluator's Rating
Attainment of objectives and planned results (overall rating) Sub criteria (below)	Highly complex and challenging undertaking. Many positive aspects but objectives were not all realistic	Moderately Satisfactory (4)
Effectiveness (project objectives)	Some objectives were overambitious given available time and resources.	
Effectiveness (expected outcomes)	Actual outputs were generally strong, including strong, authoritative reports. Some effective capacity building. Communication and outreach after outputs were available was suboptimal.	
Relevance	Important highlighting of value of ecosystem services as contribution to global biodiversity conservation	
Efficiency	Significant benefits from mobilizing global scientific community on voluntary basis.	
Achievement of outputs and activities	Realistic formal objectives were achieved. Solid reports published. A few audiences left out.	Satisfactory (5)
Cost-effectiveness	International meetings absorbed considerable proportion of resources, SGAs were underfunded. Significant benefits from voluntary inputs.	Moderately Satisfactory (4)
Impact	Broad rather than deep impacts, although too early to assess. Limited impact on policy and decision makers in developing countries.	Moderately Satisfactory (4)
Sustainability (overall rating) Sub criteria (below)	Huge challenge to follow up and/or mainstream findings, unclear who is responsible or should take the initiative. Important contribution to society-nature-economy debate. Limited convincing indications of long-term benefits.	Moderately Unsatisfactory (3)
Financial	May be difficult to repeat on same scale in current donor climate	
Socio Political	Seems more likely to affect research than policy agenda	
Institutional framework and governance	There were gains from the decision to adopt a non-intergovernmental process, although the next stage is unclear.	
Ecological	Difficult to link to specific ecological gains.	
Stakeholders participation	Broad consultations, impressive multi-stakeholder process, good communications, although some intended user groups excluded.	Satisfactory (5)
Country ownership	Limited involvement or awareness of decision makers,	Moderately

Criterion	Evaluator's Summary Comments	Evaluator's Rating
	especially in developing countries.	Unsatisfactory (3)
Implementation approach	Excellent leadership and project management throughout.	Highly Satisfactory (6)
Financial planning	Solid financial management. Allocation of available resources and fundraising during project suboptimal	Moderately Satisfactory (4)
Replicability	Case for replication not completely convincing. Institutional partners have not moved on this.	Moderately Unsatisfactory (3)
Monitoring and Evaluation (overall rating) **Sub criteria (below)**	Adequate	Satisfactory (5)
Effective M&E system in place (Indicators, baselines, etc.)	Adequate	
Information used for adaptive management	Adequate	
Overall Rating		Moderately Satisfactory (average score 4.2)

Follow Up Activities

130. Various follow-up options have been considered by the MA core team and partners. These include: (i) further outreach and communication to ensure that the MA's findings and messages reach as broad an audience as possible; (ii) the production of a report focused on the MA's methodology; (iii) training and capacity-building on the MA's integrated ecosystem assessment approach; and (iv) continued coordination of the SGAs that are still underway. Some of these activities are being undertaken by WRI and partners, others are included in a tentative medium-sized GEF project proposal that has been under discussion for more than a year. In addition, a few countries are planning to carry out their own national assessments. Other follow-up activities are mentioned in the body of this report. These various activities all appear to have considerable value.

131. Some MA Board members have called for the assessment to be repeated at regular intervals, following the IPCC example, although we have been unable to detect any willingness among donors for a full-scale repeat of the MA at this point. Certainly the IPCC process gathered significant momentum only with the issuance of its third assessment report, and its influential activities are now closely monitored by policy makers as well as the media. A difficulty in applying that example to the MA is that – unlike climate change – biodiversity and ecosystems still lack credible quantitative methods and data to measure changes over time across different spatial scales. The MA Project's efforts to develop a more quantitative baseline were ultimately frustrated by time and resource limitations, despite strenuous efforts. The value of another full MA within a relatively short period may be limited unless more compelling quantitative global data sets can be developed to help measure progress.

132. The MA mid-term evaluation raised several key questions for any decision about the future of the MA, and these remain relevant:

- Should the MA continue, in some form, beyond its current assessment? While support for regular global assessments seems limited, other models may be appropriate including tracking key indicators or monitoring of trends and conditions in ecosystem services for a periodic sampling of the health of the world's ecosystems.

- If the MA is to continue, what form should it take? There seems to be little support for institutionalizing the MA although there may be benefits from facilitating an expanded group of SGAs more closely tied to local or national decision-making processes.

- What relationship should future MA activities have to other organizations? Should a future MA become more formally affiliated with one or more conventions? The IPCC, for example, regularly produces special reports for the UNFCCC. Or should future MA activities be subsumed under UNEP's GEO series?

- Should the MA remain a multi-stakeholder process or become more intergovernmental?

133. We concur with the mid-term evaluation team that a key overarching question is whether MA participants, sponsors and partners see "scientific assessment" as the appropriate model for linking ecosystem science and policy at the global level.

134. The current unavailability of working models that can readily be used by policymakers to analyze ecosystems services and their trade-offs with development policies and resource allocations constrains the MA's potential for influencing environmental trends on the ground. Translation of the MA into operational methodologies and tools that will support decision making and policy setting seems absolutely critical, even though it is not clear at this point who should do this or how. The MA emphasis on ecosystem services and trade-offs and their links to human well-being have been welcomed by the conservation community as a bridge to development efforts focused on poverty mitigation, in other words making biodiversity more relevant to the needs of society. But the real test will be whether the international development community starts to take up and utilize tools and methods based on the MA approach, and when governments and private firms start to use these tools and methods to guide their investments.

135. Unless significant progress can be catalyzed in these areas, the main legacy of the MA may be to influence the direction of research, which certainly has potential value but would hardly seem to justify the investment that has been made. It is not clear that the community that carried out the MA would be best suited to carrying these three priority tasks forward.

Recommendations

136. Based on our evaluation, there appear to be three priorities for immediate MA follow-up activities in addition to the steps already being taken by a variety of organizations:

- An MA communications and outreach effort that engages more effectively with decision and policy makers, especially in developing countries.

- Using the MA findings to develop sets of operational tools and methods that can be adopted and applied by practitioners.

- Training potential users of these tools and methods, and implementing case studies to demonstrate their value and broader applicability, especially in developing countries.

137. These steps appear vital to maintaining the momentum of the MA and we would not anticipate they should collectively involve an investment of much more than $1 million, which does not seem excessive if it were to significantly enhance the impact of a $20 million project. Key implementation partners at a global level might include UNEP, IUCN, the World Bank Institute, UNDP, the World Business Council for Sustainable Development and WRI.

138. We encourage the active members of the MA Board's Executive Committee (which will continue to meet until the Project is closed) to develop and submit recommendations in these three areas to UNEP (as Implementing Agency of the MA Project), the other GEF Implementing Agencies and the GEF Secretariat, UNF and the CBD Secretariat.

139. To help focus discussion on long-term follow-up steps, we encourage the same key MA stakeholders to develop and assess options for repeating the MA in some form in several years time, ranging from a full-scale repeat to a briefer, less expensive exercise focusing on particular topics related to the MA. Options for an appropriate governance structure should be included.

140. We encourage UNEP to:

1. Decide if it wants to take responsibility for coordinating and helping mobilize funding for MA follow-up activities and, if so, to spell out what this role might entail and discuss with the other MA stakeholders. Key roles could include: (i) following up on the recommendations made here, (ii) continued coordination of the continuing SGAs, (iii) monitoring MA impacts, and (iv) helping mobilize funding.

2. For future global or regional environmental assessments seriously consider: (i) adopting the broad institutional partnership model that contributed significantly to the MA's successes, and (ii) applying the MA's decentralized, autonomous secretariat model.

Lessons

141. Any future MA assessments should strive to ensure that:

1. Broad consultations are conducted during the design phase.

2. Project objectives are consistent with the availability of time and resources.

3. Decision and policy makers are involved from an early stage if they are expected to act on the results.

4. If sub-global assessments are included, adequate resources and time should be budgeted for their design and implementation.

5. Activities best carried out in sequence should not be forced into parallel implementation by timing or resource constraints.

6. Honorariums should be provide for developing country participants if possible.

7. A capacity building program for junior scientists should be included.

8. Specific capacity building may be needed to engage government staff expected to ultimately implement approaches developed.

9. Government participation should go beyond environment ministries to involve key decision makers in national planning and finance as well as all sectors with an impact on ecosystem management.

10. Exceptionally able Project staff are essential.

11. Effective use is made of the global community of scientists that emerged as a result of the MA process.

Final Comments

142. An important step to avoid would be to make national MA-type studies a prerequisite for development assistance, for example for GEF funding. Developing countries already feel that they have satisfied a demanding stream of requirements for national environmental planning reports of one type or another, few of which have been followed up by sufficient resource allocations to support implementation and few of which have had more than a very brief shelf life.

143. The admirable MA focus on the value of ecosystem services should not lead to a broad assumption that conservation can 'pay for itself' if only the 'users' can be identified and drawn into a market-based payment system, particularly in developing countries. Conserving biodiversity and ecosystems in developing countries will require substantially larger sustained transfers of financial resources from richer countries. While this alone will not make conservation more effective, it remains a basic necessity.

ANNEXES

1. Evaluation Terms of Reference
2. Co-financing and Leveraged Resources Analysis
3. List of Interviewees
4. Report: 'Millennium Ecosystem Assessment: Survey of Initial Impacts' (in separate file)
5. Supporting Financial Information

Annex 1

TERMS OF REFERENCE

Terminal Evaluation of the UNEP GEF project "Millennium Ecosystem Assessment" MT/FP/CP/1010-01-04

BACKGROUND

Project rationale

The Millennium Ecosystem Assessment (MA) project was designed to improve the management of ecosystems and their contribution to human well-being by helping to bring the best available information and knowledge on ecosystem services to bear on policy and management decisions. The MA consisted of a global scientific assessment as well as catalytic regional, national, and local assessments and aimed to build capacity at all levels to undertake integrated ecosystem assessments and to act on their findings.

The project aimed to provide an accurate description of the current extent, trends, pressures, conditions and value of different ecosystems of the world, establishing a clear baseline for the year 2000 and developing a set of plausible scenarios for how the quality and quantity of ecosystem services may change in coming decades in different regions of the world. It also aimed to assess the response options for different ecosystems, identifying policy, institutional arrangements, and technologies that could improve the management of ecosystems. The results were intended be policy-relevant but not policy-prescriptive. The project adopted a demand-driven approach as key users of information generated by the assessment have been involved in the design of the project from the outset and were expected to play a clear role in shaping the structure and organization of the project.

The main objectives of the MA were to:

1. Help bring the best available information and knowledge on ecosystem goods and services to bear on policy and management decisions
2. Build capacity at all levels to undertake integrated ecosystem assessments and to act on their findings.

The expected outcomes of the MA include:

1. A methodology for conducting integrated ecosystem assessments at local, national, regional, and global scales is produced
2. A global assessment of pressures, conditions, trends, scenarios, and response options related to ecosystem goods and services is produced.
3. National, regional, and global integrated ecosystem assessments catalyzed by the MA process.
4. The published findings of the Assessment are widely distributed in print and electronic form and used by key target audiences.

Relevance to GEF Programmes

The project conforms to the GEF Operational Strategy and Operational Programmes 1, 2, 3 and 4 by producing a scientific baseline on global ecosystem function for the provision of

goods and services which will allow improved evaluation of the impact of biodiversity and other ecosystem related projects.

Executing Arrangements

The project was coordinated by UNEP in partnership with the following lead co-executing agencies: WorldFish Center, Malaysia; World Resources Institute, USA; UNEP-WCMC, UK; and the Institute of Economic Growth (IEG), India. Also acting as co-executing agencies were the Scientific Committee on Problems of the Environment (SCOPE), France; Meridian Institute, USA; and RIVM, the Netherlands. The MA responded to the requests for assessment information from the Convention on Biological Diversity, the Convention to Combat Desertification, the Convention on Wetlands (Ramsar), and the Framework Convention on Climate Change and was a partnership of institutions and donors including FAO, UNESCO, UNDP, WHO, the Global Environment Facility, Consultative Group on International Agricultural Research, World Bank, International Council for Science, World Conservation Union and UNF/UNFIP.

The Board of the MA comprising of regional representatives and representatives from the associated and cooperating partner agencies was established to govern the project.[8] The Executive Committee would act on behalf of the Board to oversee the implementation of the plans and procedures agreed to by the Board. The Assessment Panel oversaw the technical and scientific work of the MA. Working Groups were established to undertake specific components of the Assessment work. The distributed Secretariat of the MA located at the various co-executing agencies consisted of the coordinators of the different Working Groups and project staff with the Project Director responsible for management of the operations of the MA and day-to-day contact with the Panel and Working Group Co-Chairs.

Project Activities

The project duration was extended by 6 months to September 2005, from the original48 months, from April 2001 to March 2005 a six-month "start up phase".[9] As at end 2005, final activities related to printing and distribution of the technical reports, and translations of the reports, are still ongoing, with completion expected in early 2006.

The project had four components of activities:

1) Development of Methodology
2) Global Assessment
3) Catalytic Regional, National, and Local Assessments (Sub-global Assessments)
4) Outreach and Communications.

Budget

The total original project budget was US$ 20,824,000, with US$ 6,960,000 funded by the GEF Trust Fund, US$ 4,200,000 funded by the UNF Trust Fund and US$ 1,500,000 as counterpart contribution to the World Bank. 35 per cent (US$ 7,364,000) of the total budget

[8] In establishing the Board, some attention was given to geographical balance but this was not a primary criterion. The Board consisted of institutional representatives, and "at-large" members invited in their personal, distinguished capacities. The ultimate effect was to secure a wide range of representation from all sectors: science, business, indigenous people etc.

[9] None of the GEF or UNF funds were applied to activities undertaken prior to April, 2001. The six-month "start up" phase was initiated beginning on October, 2000 and this date is used as the commencement date for the project. Pro Doc p. 1 (footnote no. 1)

was expected as in-kind contribution. The UNEP Environment Fund contributed in cash US$800,000. During the course of the MA, further funding was raised for the sub-global assessments, expanded outreach activities, and an international conference.

TERMS OF REFERENCE FOR THE EVALUATION

1. Objective and scope of the evaluation

An evaluation should consider whether "*we did the right thing?"* It should examine the rationale, the justification of the undertaking, make a reality check and look at the satisfaction of intended beneficiaries. The evaluation should also consider whether "*we did things right?* It should assess the effectiveness of achieving expected results. It should examine the efficiency of the use of inputs to yield results. Finally, evaluation asks "*Are there better ways of achieving the results?"* An evaluation should look at alternative ways, good practices and lessons learned.

The primary objective of this terminal evaluation is to establish project impact with reference to objectives and outcomes and evaluate implementation of planned project activities and outputs against actual results. The principal focus will be on three main questions:

1) **Has the methodology and approach used for conducting the integrated ecosystem assessments effectively built relevant capacity and stakeholder ownership at all levels?**
2) **Was the scientific assessment sufficiently credible to effectively and adequately meet the information needs of users?**
3) **To what extent have the MA project outputs been used and to what extent has the MA process and outputs led to change in ecosystem-related conventions and natural resource management?**

The analysis of impact and outcomes achieved should include, *inter alia*, an assessment of the extent to which the project has (1) helped produce the best available information and knowledge on ecosystem goods and services ***and the extent to which it has been utilized in policy and management decisions at global, regional, national and local levels***; and (2) strengthened capacity to undertake integrated ecosystem assessments and to implement action based on the assessments. The "achievement" indicators and verifiers provided in the log frame of the project document should be used together with the evaluation parameters of sustainability, replicability, stakeholder participation, effectiveness and efficiency.

The evaluation shall make recommendations that may contribute to the assessment and development of GEF's portfolio of projects. Furthermore, the evaluation should highlight lessons learned - both the positive as well as the negative, from the standpoint of the design and implementation of the project geared towards enhancing planning and implementation of future GEF and UNEP programs and projects related to global assessments.

The evaluation should also include a breakdown of final actual costs and co-financing for the project prepared in consultation with the relevant UNON/DGEF Fund Management Officer of the project (table attached in Annex 1 Co-financing and leveraged resources). The evaluation shall comment on financial management and co-financing arrangements.

The success of project implementation will be rated on a scale from 'highly unsatisfactory' to 'highly satisfactory'. In particular the evaluation shall **assess and rate** the project with respect to the eleven categories defined below:

A. Attainment of objectives and planned results:

The evaluation should assess the extent to which the project's major relevant objectives were effectively and efficiently achieved, or are expected to be achieved, and their relevance.

- *Effectiveness*: Evaluate how, and to what extent, the stated project objectives have been met, taking into account the "achievement indicators" in the project logframe / project document. In particular, evaluate whether and to what extent the results of this project have been utilized in policy decisions at all levels and strengthened capacity to undertake integrated ecosystem assessments and to implement action based on the assessments.
- *Relevance*: In retrospect, were the project's outcomes consistent with the focal areas/operational program strategies? The evaluation should ascertain the nature and significance of the contribution of the project outcomes to the wider portfolio of GEF Operational Programmes no. 1, 2, 3 and 4.

B. Achievement of outputs and activities:

- Assess the scope, quality and usefulness of the project outputs in relation to its expected results.
- Assess the soundness and effectiveness of the methodologies used for undertaking integrated ecosystem assessment as well as their relevance for informing decision-makers and catalyzing action based on the findings of the assessments.
- Assess whether the MA approach / methods been used in other large environmental assessment initiatives (e.g. Land Degradation Assessment in Drylands (LADA), Assessments of Impacts and Adaptations to Climate Change (AIACC), Global International Waters Assessment (GIWA), WRI's World Resources Report)
- Assess to what extent project outputs produced have the weight of scientific authority necessary to influence policy makers, particularly the GEF, its Implementing Agencies and other relevant stakeholders.

C. Cost-effectiveness:

Efficiency: Cost-effectiveness assesses the achievement of the environmental and developmental objectives as well as the project's outputs in relation to the inputs, costs, and implementing time. Include an assessment of outcomes in relation to inputs, costs, and implementation times based on the following questions: Was the project cost–effective? How does the cost-time vs. outcomes compare to other similar projects? Was the project implementation delayed? Was the project compliant in the application of the incremental cost concept[10]? The evaluation will:

- Assess the cost-effectiveness the GEF funded activities of the project and whether these activities achieved the goals and objectives within planned and/or reasonable time and budget. How did the costs compare to the costs of similar projects in similar contexts?

[10] http://www.gefweb.org/council/council7/c7inf5.htm

- Assess the contribution of cash and in-kind co-financing to project implementation and to what extent the project leveraged additional resources.
- Determine the extent to which external scientific and technical information and knowledge have been incorporated and have influenced the execution of the project activities (i.e. consider whether the project effectively capitalised on pre-existing research investment).

D. Financial Planning

Evaluation of financial planning includes assessment of actual project costs by activities compared to budget (variances), financial management (including disbursement issues), and co- financing (see Annex 1 for further discussion on co-financing), the scope of financial management includes decisions and processes of both implementing and the executing agencies[11]. The evaluation should:

- Assess the strength and utility of (both IA and EA) financial controls, including reporting, and planning to allow the project management to make informed decisions regarding the budget and allow for a proper and timely flow of funds for the payment of satisfactory project deliverables.
- Present the major findings from the financial audit if one has been conducted.
- Identify and verify the sources of co- financing as well as leveraged and associated financing (in co-operation with the IA and EA).
- Review major financial report documents and assess whether the project has applied appropriate standards of due diligence in the management of funds. The evaluation should:
  - Establish whether the project was financially "closed" at the time of evaluation, and if not specify when this is anticipated.
  - Establish whether there any outstanding financial reports.
  - Establish whether the project can account for use of 100% of the project budget.
  - Review a summary of financial revisions made and their purposes and comment on whether these reflect sound financial management.

E. Impact:

- Evaluate the immediate impact of the project on scientific research and 'conventional wisdom'.
  - Global: To what extent have MA findings and outputs been used by the scientific community and by institutions supporting scientific research to focus research support on questions that simultaneously exhibit great scientific uncertainty and significant policy ramifications?
- Evaluate the immediate impact of the project on policy development and decision-making at local, national, regional and global levels
  - Global: To what extent have MA findings and outputs been used by international institutions (including in particular the environmental conventions and the plans and strategies of the GEF) to:
    a) measure progress in achieving conservation and sustainable use

[11] Prior to the Evaluation UNEP DGEF Fund Management Officers will provide: a) an up to date co-financing table, b) a summary report on the projects financial management and expenditures during the life of the project - to date and c) a summary of financial revisions made to the project and their purpose.

objectives?
b) help identify priorities for action? and,
c) identify "best practices" for how to respond to degradation of ecosystem goods and services?

- Global: To what extent have MA findings and outputs been used by the media and private sector as "the" source of scientific consensus on controversial issues regarding changes in ecosystems and their potential impacts on health, economics, and development?
- Sub-global: To what extent have the findings of the global assessment and catalytic sub-global assessments been used by national governments, the private sector, and civil society:
  a) to identify priorities for action,
  b) to identify best practices and
  c) as "the" source of scientific consensus on controversial issues regarding changes in ecosystems and their potential impacts?
- Sub-global: To what extent have findings and outputs been used by decision-makers at the scales and places where the assessments operated, to identify "best practices" for how to respond to degradation of ecosystem goods and services?

- As far as possible, also assess the **potential longer-term impacts**, considering that the evaluation is taking place upon completion of the project and that longer term impact is expected to be seen in a few years time. Which will be the major 'channels' or 'pathways' for longer term impact? The evaluation should formulate recommendations that outline possible approaches and necessary actions to facilitate an impact assessment study for the MA in a few years time.

F. Sustainability:

Sustainability is understood as the probability of continued long-term project-derived outcomes and impacts after the GEF project funding ends. The evaluation will identify and assess the key conditions or factors that are likely to contribute or undermine the persistence of benefits after the project ends. Some of these factors might be outcomes of the project, i.e. stronger institutional capacities, legal frameworks, socio-economic incentives / or public awareness. Other factors will include contextual circumstances or developments that are not outcomes of the project but that are relevant to the sustainability of outcomes. The following five aspects of sustainability will be addressed: financial, socio-political, institutional frameworks and governance, ecological (if applicable), and replication[12.] (see item J). The following questions provide guidance to assess if the components are met (in the context of this project some aspects of project sustainability may be more relevant than others):

- *Financial resources.* What is the likelihood that financial and economic resources will be available such that the project outcomes/benefits will be sustained once the GEF assistance ends (resources can be from multiple sources, such as the public and private sectors, income generating activities, and market trends that support the project's objectives)? Was the project successful in identifying and leveraging co-financing?

[12] Replication refers to repeatability of the project under quite similar contexts based on lessons and experience gained. Actions to foster replication include dissemination of results, seminars, training workshops, field visits to project sites, etc. GEF Project Cycle, GEF/C.16/Inf.7, October 5, 2000

- *Socio-political:* What is the likelihood that the level of stakeholder ownership will allow for the project outcomes/benefits to be sustained? Do the various key stakeholders see in their interest that the project benefits continue to flow? Is there sufficient public / stakeholder awareness in support of the long term objectives of the project?
- *Institutional framework and governance*. What is the likelihood that institutional and technical achievements, legal frameworks, policies and governance structures and processes will allow for the project outcomes/benefits to be sustained? While responding this question consider if the required systems for accountability and transparency and the required technical know how are in place.
- *Ecological.* The analysis of ecological sustainability may prove challenging. What is the likelihood that MA achievements will lead to sustained ecological benefits?

G. Stakeholder participation / public awareness:

This consists of three related and often overlapping processes: information dissemination, consultation, and "stakeholder" participation. Stakeholders are the individuals, groups, institutions, or other bodies that have an interest or stake in the outcome of the GEF- financed project. The term also applies to those potentially adversely affected by a project. The evaluation will specifically:

- Assess the mechanisms put in place by the project for identification and engagement of stakeholders and establish, in consultation with the stakeholders, whether this mechanism was successful, its strengths and weaknesses. Particular attention should be paid to the level of participation by international conventions, scientists and national government institutions/organisations, civil society, and the private sector.
- Assess the degree and effectiveness of collaboration/interactions between the various project partners and institutions during the course of implementation of the project.
- Assess the degree and effectiveness of the various public awareness activities that were undertaken during the course of implementation of the project.

H. Country ownership / driveness:

This is the relevance of the project to; national development and environmental agendas, recipient country commitments, and regional and international agreements. The evaluation will:

- Assess the level of country ownership. Specifically, the evaluation should assess whether the project was relevant for national development and environmental agendas and to supporting effective implementation of ecosystem-related conventions and resource management.

I. Implementation approach:

This includes an analysis of the project's management framework, adaptation to changing conditions (adaptive management), partnerships in implementation arrangements, changes in project design, and overall project management. The evaluation will:

- Ascertain to what extent the project implementation mechanisms outlined in the project document have been closely followed. In particular, assess

the roles of the Board of the MA and the Executive Committee and whether the project document was sufficiently clear and realistic to enable effective and efficient implementation, whether the project was executed according to the plan and how well the management was able to adapt to changes during the life of the project.

  - Did the MA Board define more specifically, within the broad array of users and potential users of the MA findings and process, issues and needs to be given highest priority? If so, were the selected components of the assessment targeted for a more detailed examination appropriate and strategic?

- Evaluate the effectiveness of project execution arrangements at all levels (1) policy decisions; Board of MA, Executive Committee; (2) day to day project management and the Secretariat for the MA, and the Ecosystem Assessment Panel and Working Group Chairs. (3) The effectiveness of other partnership arrangements established for implementation of the project.
- Assess the effectiveness of supervision and administrative and financial support provided by UNDP/DEWA and UNEP/DGEF.
- Identify administrative, operational and/or technical problems and constraints that influenced the effective implementation of the project.
- Assess whether the logical framework was used during implementation as a management tool and whether feedback from M&E activities more broadly was used for adaptive management.

J. Replicability:

Replication and catalysis. What examples are there of replication and catalytic outcomes that suggest increased likelihood of sustainability? Replication approach, in the context of GEF projects, is defined as lessons and experiences coming out of the project that are replicated or scaled up in the design and implementation of other projects. Replication can have two aspects, replication proper (lessons and experiences are replicated in different geographic areas) or scaling up (lessons and experiences are replicated within the same geographic area but funded by other sources).

- Assess whether the project has potential to be replicated, either in terms of expansion, extension or replication in other countries and/or regions and whether any steps have been taken by the project to do so and the relevance and feasibility of these steps.

K. Monitoring and Evaluation:

- The evaluation shall include an assessment of the quality, application and effectiveness of project monitoring and evaluation plans and tools, including an assessment of risk management based on the assumptions and risks identified in the project document. The evaluation shall comment on how the monitoring mechanisms were employed throughout the project's lifetime, whether this allowed for tracking of progress towards project objectives and how the project responded to the challenges identified through these mechanisms. The tools used might include a baseline, clear and practical indicators progress monitoring and data analysis systems, or studies to assess results that were planned and carried out at specific times in the project.

The ratings will be summarised in the form of a table. Each of the eleven categories should be rated separately with brief justifications based on the findings of the main analysis. An overall rating for the project should also be given. The following rating system is to be applied:

HS = Highly Satisfactory
S = Satisfactory
MS = Moderately Satisfactory
MU = Moderately Unsatisfactory
U = Unsatisfactory
HU = Highly Unsatisfactory

2. Methods

This terminal evaluation will be conducted as an in-depth evaluation using a participatory approach whereby the UNEP/GEF Task Manager, the UNEP/DEWA Chief of Assessment Branch and other relevant staff are kept informed and regularly consulted throughout the evaluation. The consultant will consult with the UNEP/EOU, the UNEP/DGEF Task Manager and the UNEP/DEWA Chief of Assessment Branch on any logistical and/or methodological issues to properly conduct the review in as independent a way as possible given the circumstances and resources offered.

The Lead Evaluator will be responsible for the design of the evaluation framework. It is suggested that the evaluation team consider grouping the subject matter of the TOR into three broad points of view (POVs) for purposes of data collection and analysis. This approach was adopted in GEF's OPS3[13] and allowed for a more focused and thematic approach to assessment of performance. The POVs suggested for the evaluation of the MA are the:

- **Cross-cutting point of view**, which includes issues concerning, among other things, the MA's role as a catalytic initiative, capacity development and similar issues that can be observed across the MA's operations, sustainability, contributions to global benefits, replicability, incremental cost, country-drivenness etc.
- **Assessment-based point of view,** focussing on the quality and utility of the interlinked assessments undertaken at local, watershed, national, regional and global scales especially the Global, and Sub-global assessments.
- **Institutional point of view**, which includes the effectiveness of the MA structure, roles, and responsibilities and the core processes the MA used for conducting its work.

In assessing the MA from these different perspectives, it is essential that the evaluators speak with as wide a range of people as possible including Board and Panel members, secretariat, convention bodies, sub-global users, authors, review editors etc. Opportunities to achieve this effectively and efficiently will involve telephone and email contact. Opportunities to meet a wide range of people associated with the MA also occur at convention meetings. COP 8 of the CBD[14] provides an ideal opportunity for the evaluator to meet many individuals linked to the

[13] http://www.gefweb.org/MonitoringandEvaluation/MEOngoingEvaluations/MEOOPS3/meoops3.html

[14] COP 8 - Eighth Ordinary Meeting of the Conference of the Parties to the Convention on Biological Diversity Curitiba, Brazil (20 - 31 March 2006)

MA and to interact with the global-level policy processes. This will also help the evaluation of policy impacts[15].

The Southern African Sub-global assessment (SAfMA) is suggested for an in-depth review. It has been fully complete for some time and is therefore one of the best candidates for assessing impact. The Integrated Assessment of the Salar de Atacama in Chile will provide a second case for an in-depth evaluation of an MA sub-global assessment as it is regarded as one of the best examples of a sub-global assessment that had "impact" at the scale and in the specific location it operated.

The findings of the evaluation will be based on the following:

1. A desk review of project documents including, but not limited to:
   a) The project documents, outputs, monitoring reports (such as progress and financial reports to UNEP and GEF annual Project Implementation Review reports) and relevant correspondence.
   b) Review of specific products including computer software, publications in international journals, peer-reviewed books, regional synthesis papers, reports from regional workshops as well as national case studies, highlighting case studies, technical information, research results, methodological guidelines, strategies and recommendations related to wider application of the generic tools and methodological approach developed by the project;
   c) Notes from the Board of MA, the Executive Committee and the Ecosystem Assessment Panel meetings
   d) Other material produced by the MA Secretariat, or MA partner organisations
   e) The project web site, www.millenniumassessment.org

2. Interviews with project management (such as the coordinators of the Working Groups, the Director, Program Officer, Assistant and Communications Specialist as well as Administrative and Finance Personnel, and telephone interviews with members of Working Groups, Panels as well as the Executive Committee and MA Board.

3. Interviews and Telephone interviews with other stakeholders in the different regions, which were involved with this project. As appropriate, these interviews could be combined with an email questionnaire;

4. The evaluation team shall approach representatives of key target audiences for the products developed by the project (e.g. donor agencies, representatives of UNF, World Bank, Convention Secretariats, Government and Non-Governmental organizations etc.). ***Examples and evidence of the use of project products by key target audiences shall be verified and reported wherever possible.***

5. Interviews with the UNEP/DGEF project task manager and Fund Management Officer, and other relevant staff in UNEP/DEWA and UNEP/DGEF as necessary.

3. Resources and schedule of the evaluation

This final evaluation will be undertaken by an evaluation team of a lead evaluator and two supporting evaluators. The principal evaluator is responsible for coordinating the work of the evaluation team, leading the review of the global outputs and preparing the final evaluation

[15] (e.g. IUCN's position paper, circulated recently to all members, regarding the draft Millennium+5 declaration draws heavily on the MA findings)

report covering the Terms of Reference. The supporting evaluators are each responsible for preparing an in-depth evaluation of one of the sub-global assessments.

The contract for the lead evaluator will begin on 20th February 2006 and end on 31st May 2006 56 working days spread over 14 weeks. The contract for the supporting evaluators will begin on 20th February 2006 and end on 8th May 2006 and include 35 days spread over 11 weeks.

The lead evaluator will submit a draft report to EOU on 31st May 2006, with a copy to the UNEP/GEF Task Manager, the UNEP/DEWA Chief of Assessment Branch and the Project Director for initial comments. Comments to the final draft report will be sent to the consultant by 15th June 2006 the latest after which the consultant will submit the final report no later than 30th June 2006.

In accordance with UNEP/GEF policy, all GEF projects are evaluated by independent evaluators contracted as consultants by the EOU. The evaluators should have the following qualifications and undertake the duties and travel described:

Lead evaluator:
The principal evaluator should not have been associated with the design and implementation of the project. The evaluator will work under the overall supervision of the Chief, Evaluation and Oversight Unit, UNEP. The evaluator should be an eminent international expert and have the following minimum qualifications: (i) experience on ecosystems and their management; (ii) experience with management and implementation of global projects and in particular with targeted assessment projects that generate policies/strategies, knowledge and information; (iii) experience with project evaluation. Knowledge of UNEP programmes and GEF activities is desirable. The lead evaluator will be responsible for the overall preparation, quality and delivery of the evaluation report.

First and second supporting evaluators (sub-global assessmenst):
The supporting evaluator conducting evaluations of a sub-global assessment should not have been associated with the design and implementation of the project. The evaluator will work under the overall supervision of the Lead Evaluator. The evaluator should have the following minimum qualifications: (i) experience on ecosystems and their management, in particular arid and semi-arid ecosystems; (ii) experience with project management and implementation and in particular with targeted assessment projects that generate policies/strategies, knowledge and information; (iii) experience with project evaluation. Knowledge of UNEP programmes and GEF activities, in particular Land-degradation Assessment in Drylands (LADA) is desirable. The supporting evaluators will work under the supervision of the lead evaluator, with the division of labour agreed among the team.

Suggested field visits for the evaluation team
The evaluation team will travel and meet at the UNEP Headquarters in Nairobi, Kenya at the beginning of the evaluation. Whilst in Nairobi the review team will consult with staff from UNEP DEWA, UNEP DGEF and UNEP EOU. The review team will also visit ICRAF to discuss the Alternatives to Slash-and-Burn (ASB) Cross-cutting Sub-Global Assessment[16].

[16] ASB has recently been independently evaluated .http://www.asb.cgiar.org/impact/impact/ASB_Review_FINAL.pdf

The evaluation team will travel to Zimbabwe and South Africa to conduct in-depth discussions with participating national scientists and collaborating institutions in relation to the Southern African Sub-global Assessment. A visit to Chile to evaluate the Integrated Assessment of the Salar de Atacama Sub-global assessment will also be undertaken. Members of the review team will attend COP 8 and also meet with key individuals and organisations in Washington D.C.

Location	Purpose	Evaluators attending	Duration & Timing
Nairobi Kenya	Meet with staff from UNEP DEWA, UNEP DGEF and UNEP EOU to discuss evaluation approach and gather data, visit ICRAF - ASB Cross-cutting Sub-Global Assessment	All	5 days
Zimbabwe and South Africa	In-depth review of the Southern African Sub-global assessment (SAfMA) i. The SAfMA Coordinator, Connie Musvoto, based at The Institute of Environmental Studies, University of Harare; ii. Johannesburg / Pretoria to visit Bob Scholes of CSIR (Co-Chair of the Condition and Trends Working Group) and some advisory committee members (e.g. Hector Magome of SA Parks, Ivan May, Julienne du Toit); iii. SAfMA team members at either Rhodes University or Stellenbosch University.	Lead Evaluator Evaluator (assessment)	5 days
Chile	To evaluate the Integrated Assessment of the Salar de Atacama Sub-global assessment	Evaluator (assessment)	7 days
Curitiba, Brazil	Attend COP 8 CBD (20 - 31 March 2006), meet many individuals linked to the MA and interact with the global-level policy processes to assist in evaluation of policy impacts	Lead Evaluator Evaluator (policy) Evaluator (assessment)	5 days
Washington DC, USA Supported by phone and email	Visit key people involved with the MA project and in Conventions e.g. Meridian Institute, WRI – Jonathan Lash Bob Watson WB, Sub-global Co-chair Cristian Samper, Habiba Gitay	Lead Evaluator Evaluator (policy)	2 days

4. Evaluation report format and review procedures

The report should be brief, to the point and easy to understand. It must explain; the purpose of the evaluation, exactly what was evaluated and the methods used. The report must highlight any methodological limitations, identify key concerns and present evidence-based findings, consequent conclusions, recommendations and lessons. The report should be presented in a way that makes the information accessible and comprehensible and include an executive summary that encapsulates the essence of the information contained in the report to facilitate dissemination and distillation of lessons.

The evaluation will rate the overall implementation success of the project and provide individual ratings of the eleven implementation aspects as described in Section 1 of this TOR. *The*

ratings will be presented in the format of a table **with brief justifications based on the findings of the main analysis.**

Evidence, findings, conclusions and recommendations should be presented in a complete and balanced manner. Dissident views in response to evaluation findings may be appended in an annex. The evaluation report shall be written in English, be of no more than 50 pages (excluding annexes), use numbered paragraphs and include:

i) An **executive summary** (no more than 3 pages) providing a brief overview of the main conclusions and recommendations of the evaluation;
ii) **Introduction and background** giving a brief overview of the evaluated project, for example, the objective and status of activities;
iii) **Scope, objective and methods** presenting the evaluation's purpose, the evaluation criteria used and questions to be addressed;
iv) **Project Performance and Impact** providing factual evidence relevant to the questions asked by the evaluator and interpretations of such evidence;
v) **Conclusions and rating** of project implementation success giving the evaluator's concluding assessments and ratings of the project against given evaluation criteria and standards of performance. The conclusions should provide answers to questions about whether the project is considered good or bad, and whether the results are considered positive or negative;
vi) **Lessons learned** presenting general conclusions, based on established good and bad practices, with a potential for wider application and use, the context in which lessons may be applied should be specified;
vii) **Recommendations** suggesting *actionable* proposals regarding improvements of current or future projects. They may cover resource allocation, financing, planning, implementation, and monitoring and evaluation. They should always be specific in terms of who would do what and provide a timeframe;
viii) **Annexes** include terms of reference, list of interviewees, and so on.

Examples of UNEP GEF Terminal Evaluation Reports are available at www.unep.org/eou

Review of the Draft Evaluation Report
Draft reports submitted to UNEP EOU are shared with the corresponding Programme or Project Officer and his or her supervisor for initial review and consultation. The DGEF staff and senior Executing Agency staff are allowed to comment on the draft evaluation report. They may provide feedback on any errors of fact and may highlight the significance of such errors in any conclusions. The consultation also seeks agreement on the findings and recommendations. UNEP EOU collates the review comments and provides them to the evaluators for their consideration in preparing the final version of the report.

Quality Assessment of the Evaluation Report
All UNEP GEF Terminal Evaluation Reports are, themselves, subject to quality assessments by the GEF independent Evaluation Office (GEF EO). UNEP EOU therefore applies these GEF EO quality assessment criteria and the GEF Minimum Requirements for Terminal Evaluations to the draft Terminal Report as a tool for providing structured feedback.

The quality of the draft evaluation report will be assessed and rated against the following criteria:

Report Quality Criteria	UNEP EOU Assessment notes	Rating

A. Did the report present an assessment of relevant outcomes and achievement of project objectives in the context of the focal area program indicators if applicable?		
B. Was the report consistent and the evidence complete and convincing and were the ratings substantiated when used?		
C. Did the report present a sound assessment of sustainability of outcomes?		
D. Were the lessons and recommendations supported by the evidence presented?		
E. Did the report include the actual project costs (total and per activity) and actual co-financing used?		
F. Did the report include an assessment of the quality of the project M&E system and its use for project management?		

Rating system for quality of terminal evaluation reports

A number rating 1-6 is used for each criterion: Highly Satisfactory = 6, Satisfactory = 5, Moderately Satisfactory = 4, Moderately Unsatisfactory = 3, Unsatisfactory = 2, Highly Unsatisfactory = 1, and unable to assess = 0.

A score for the quality of the terminal evaluation report is calculated by applying the GEF OE formula as follows:

Quality of the TE report = 0.3*(A + B) + 0.1*(C+D+E+F)
The total is rounded and converted to the scale of HS to HU

General comments on the draft report with respect to compliance with these TOR will also be compiled and shared with the evaluation team.

5. Submission of Final Terminal Evaluation Reports.

The final report shall be submitted in electronic form in MS Word format and should be sent to the following persons:

Segbedzi Norgbey, Chief, Evaluation and Oversight Unit
UNEP, P.O. Box 30552
Nairobi, Kenya
Tel.: (254-20) 624181
Fax: (254-20) 623158
Email: segbedzi.norgbey@unep.org

With a copy to:

Olivier Deleuze, Officer in Charge
UNEP/Division of GEF Coordination
P.O. Box 30552
Nairobi, Kenya
Tel: + 254-20-624166
Fax: + 254-20-624041/4042
Email: olivier.deleuze@unep.org

Anna Tengberg
UNEP/GEF Task Manager
United Nations Environment Programme (UNEP)

Division of GEF Coordination (DGEF)
PO Box 30552
Nairobi, Kenya
Tel: 254 20 624147
Fax: 254 20 624041/42
Email: anna.tengberg@unep.org

Ivar Baste
UNEP/DEWA Chief of Assessment Branch
United Nations Environment Programme (UNEP)
PO Box 30552
Nairobi, Kenya
Tel: 254 20 623373
Fax: 254 20 624309
Email: ivar.baste@unep.org

The evaluation report will be printed in hard copy and published on the Evaluation and Oversight Unit's web-site www.unep.org/eou. Subsequently, the report will be sent to the GEF OME for their review and inclusion on the GEF website.

6. Schedule of payment

The evaluators will receive an initial payment of 40% of the total amount due upon signature of the contract. Final payment of 60% will be made upon satisfactory completion of work. The fee is payable under the individual SSAs of the evaluator and is NOT inclusive of all expenses such as travel, accommodation and incidental expenses. Ticket and DSA will be paid separately.

In case, the evaluator cannot provide the products in accordance with the TORs, the timeframe agreed, or his products are substandard, the payment to the evaluator could be withheld, until such a time the products are modified to meet UNEP's standard. In case the evaluator fails to submit a satisfactory final product to UNEP, the product prepared by the evaluator may not constitute the evaluation report.

Annex 2. Co-financing and Leveraged Resources Analysis

Table 2.3. Actual co-finance received and comparison with the planned co-finance contained in the initial GEF CEO endorsed budget (from UNEP)

	January 1999 - September 2005									
Cofinancing (US$)	**IA own Financing**		**Government**		**Other***		**Total Financing**		**Total disbursement**	
	Original GEF approved budget	Actual Received	Original GEF approved budget	Actual Received	Original GEF approved budget	Actual Received	Original GEF approved budget	Actual Received	Original GEF approved budget	Actual* Disbursed
Committed in cash										
UNEP	30,000	674,185					30,000	674,185	30,000	674,185
UNF					4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000
Norway			50,000	396,520			50,000	396,520	50,000	396,520
World Bank					50,000	500,000	50,000	500,000	50,000	500,000
Sub total	**30,000**	**674,185**	**50,000**	**396,520**	**4,050,000**	**4,500,000**	**4,130,000**	**5,570,705**	**4,130,000**	**5,570,705**
Committed in-kind										
UNEP	-	400,000					-	400,000	-	400,000
Norway			740,000	148,000			740,000	148,000	740,000	148,000
NASA			-	286,000			-	286,000	-	286,000
WorldFish Center (ICLARM)					-	117,000	-	117,000	-	117,000
World Bank					100,000	220,000	100,000	220,000	100,000	220,000
UNDP,FAO, UNESCO					120,000	90,000	120,000	90,000	120,000	90,000
Others (to be identified)					8,870,000		8,870,000	-	8,870,000	-
Sub total	**-**	**400,000**	**740,000**	**434,000**	**9,090,000**	**427,000**	**9,830,000**	**1,261,000**	**9,830,000**	**1,261,000**
Leveraged resources* **										
Cash										
World Bank						1,500,000	-	1,500,000	-	1,500,000
Packard Foundation					-	2,407,033	-	2,407,033	-	2,407,033
Saudi Arabia			-	400,000			-	400,000	-	400,000
SwedBio					-	105,000	-	105,000	-	105,000
ICSU					-	20,000	-	20,000	-	20,000
UNF					-	105,000	-	105,000	-	105,000
Christensen Fund					-	25,000	-	25,000	-	25,000
CIDA					-	18,000	-	18,000	-	18,000
APN					-	50,600	-	50,600	-	50,600
Sub total	**-**	**-**	**-**	**400,000**	**-**	**4,230,633**	**-**	**4,630,633**	**-**	**4,630,633**
In-kind										
China			-	1,500,000			-	1,500,000	-	1,500,000
ICRAF					-	110,000	-	110,000	-	110,000
Stockholm University					-	100,000	-	100,000	-	100,000
Sub total	**-**	**-**	**-**	**1,500,000**	**-**	**210,000**	**-**	**1,710,000**	**-**	**1,710,000**
Total	**30,000**	**1,074,185**	**790,000**	**2,730,520**	**13,140,000**	**9,367,633**	**13,960,000**	**13,172,338**	**13,960,000**	**13,172,338**

Figures for cash in Annex 1 are for contributions to the core MA budget and exclude funds raised by, and given directly to, the MA sub-global assessments. Significant in-kind contributions were raised by, and given directly to, the MA sub-global assessments, but are not included here. Notable instances include the assessments in Chile, India, the Philippines, Vietnam, Trinidad, Costa Rica, Colombia, Brazil, Portugal, and Egypt. The full list of donors to these assessments can be found in the Acknowledgements page of the MA technical volumes.

Annex 3. People interviewed and respondents to email questionnaires

A.H. Zakri
Ahmed Djoghlaf
Albert van Jaarsveld,
Alf Wills,
Alicia Charles,
Anantha Duraiappah
Andrea Kutter
Andrew Stott
Angela Cropper
Anna Tengberg
Anthony Janetos
Anthony Mitchell
B Soto
Bakari Kante
Bob Scholes,
Bob Watson
Brian Huntley
Brian Walker
Charles McNeill
Christian Prip
Christo Fabricius
Claudia Sobrevila
Colin Filer
Connie Musvoto
Cristian Samper
D Fundesile,
Dan Tunstall
David Cooper
David Richards
Dolores Armenteras
E Mendiando
Erika Harms
Erin Bohensky,
Ernesto Viglizzo
Fernando Gast
Gordana Beltram
Henrique Pereira
Hernan Blanco
Holly Dublin
Howard Nelson
Ivar Baste
J Duncan
J Ferrao
J Kenny
J Spence
Janet Ranganathan
Jeff McNeely
Jeff Sayer
John Agard
John Ehrmann
John Hough
John Hutton
Jonathan Lash
Juan Pablo Contreras
Justo Zuleta
Karen Polson
Kathy MacKinnon
Katrina Brown
Keisha Garcia
Kristin McLaughlin
M Wolfson
Marcus Lee
Margaret Friedel
Mario Ramos
Marion Cheatle
Mark Siebentritt
Mark Zimsky
Neville Ash
Nick Davidson
Norman Girvan
Oonsie Biggs
Patricia de la Torre
Peter Bridgewater
R Robinson
Richard Cowling
Rik Leemans
Robyn Cross
Rodel Lasco
Rodrigo Victor
Sam Johnston
Sandra Velarde
Stephen Bass
Tatiana Gadda
Tom Lovejoy
Tony Whitten
Veronica Moreno
Walt Reid
Warren Evans
Willem Wijnstekers
William Bond
Yolanda Kakabadse

The following National Coordinators of the GEF Small Grant Programme responded on behalf of their National Steering Committees:

Alejandra Alarcón (Chile)
Anjana Giri (Bhutan)
Bilgi Bulus (Turkey)
Nancy Chege (Kenya)
OKean Ehmes (Micronesia)
Oumar Salim Mohamed Kaba (Mali)
Raul Murguia (Mexico)
Richard Laydoo (Trinidad and Tobago)

The following people are not included in this annex: official national delegates to CBD COP-8, participants in meetings on the MA attended by the evaluation team, and interviewees who requested anonymity.

Annex 4. Report: 'Millennium Ecosystem Assessment: Survey of Initial Impacts'

(separate file)

Annex 5. Supporting Financial Information

Supplementary Information provided by UNEP at the request of the Evaluation Team

1 Reconciliation between GEF Council approved budget and original UNEP approved budget

	GEF	Co-finance	Total
Budget included in project document approved by GEF Council in May 2000			
Project development grant type B (PDF-B)	350,000	3,650,000	4,000,000
Project budget	6,960,000	13,960,000	20,920,000
	7,310,000	17,610,000	24,920,000
Budget approved by GEF Council in May 2000 (as above but excluding the PDF-B grant)	6,960,000	13,960,000	20,920,000
Project budget which received GEF CEO final endorsement on 27 November 2001 and UNEP approval on 8 January 2002	6,960,000	13,789,300	20,749,300
Decrease	0	-170,700	-170,700

Reconciliation of decrease:-	
Funds managed by UNEP under another project CP/1010-00-16	-555,000
Additional MA Board approved activities	182,300
UNF project support costs (5% of $4,000,000 UNF co-finance)	200,000
Rounding differences	2,000
	-170,700

NB UNEP use separate project document for PDF-Bs. The PDF-B grant of $350,000 approved by the GEF on 8 December 1998 and its associated co-finance was accounted for in UNEP's Millennium Assessment of the World's Ecosystems PDF-B number GF/5510-99-02 approved by UNEP on 29 June 1999.

2 Reconciliation between original UNEP approved budget and latest budget revision

Project budget which received GEF CEO final endorsement on 27 November 2001 and UNEP approval on 8 January 2002	6,960,000	13,789,300	20,749,300
Final project budget	6,960,000	13,172,338	20,132,338
Decrease	0	-616,962	-616,962

Reconciliation of decrease:-	Proposed donor contributions	Actual expenditure	Increase/ (decrease)
Funds channelled through UNEP:-			
Cost to the Environment Fund	800,000	674,185	-125,815
Cost to the UNF Trust Fund	4,000,000	4,000,000	0
World Bank contributions	500,000	500,000	0
Government of Norway	343,000	396,520	53,520
	5,643,000	5,570,705	-72,295

Funds not channeled through UNEP:-			
World Bank contributions	1,000,000	1,500,000	500,000
UNON project support costs received from UNF	200,000		-200,000
Other co-finance contributions (Co-financiers as set out below that were identified during project implementation)	6,946,300	6,101,633	-844,667
	8,146,300	7,601,633	-544,667
	13,789,300	13,172,338	-616,962

Analysis of other co-financing contributions	US$
Co-finance - in cash	
Packard Foundation	2,407,033
Saudi Arabia	400,000
SwedBio	105,000
ICSU	20,000
UNF	105,000
Christensen Fund	25,000
CIDA	18,000
APN	50,600
	3,130,633
Co-finance - in kind	
UNEP	400,000
Norway	148,000
NASA	286,000
WorldFish Centre (ICLARM)	117,000
World Bank	220,000
UNDP, FAO, UNESCO	90,000
China	1,500,000
ICRAF	110,000
Stockholm University	100,000
	2,971,000
Total Co-financing	6,101,633

According to UNEP, periodic budget revisions were undertaken every 9 months on average throughout the duration of the project. These budget revisions were undertaken by the Project Director and core Secretariat at World Fish Center, with inputs from all co-executing agencies, before submission to, and approval by, the MA Board's Budget Committee. Details are contained in the background documents and summaries of the Budget Committee meetings. Subsequent to this Budget Committee approval of the revisions at the Project level, the revisions were submitted to UNEP for approval and corresponding revisions to the records in UNEP's financial systems on a periodic basis, at least once a year.

The main reasons for the revisions to the project document prepared by UNEP were:-

- To reflect the actual expenditures to the umbrella and sub-projects for each year of the project duration and to rephrase and revise the budgets as agreed with the MA Board's Budget Committee, including extension of the project completion date as agreed.

- To introduce new sub-projects as and when required and to reflect the movement of fund allocations between the umbrella and sub-projects

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