GLOBAL ENVIRONMENT FACILITY

REVISED DRAFT GEF OPERATIONAL STRATEGY

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RECOMMENDED DRAFT COUNCIL DECISION

The Council reviewed document GEF/C.6/3, *Revised Draft GEF Operational Strategy*, and approves the GEF Operational Strategy.

CONTENTS

CHAPTER ONE

POLICY FRAMEWORK

INTRODUCTION

1.1 The Global Environment Facility (GEF) is a financial mechanism that provides grant and concessional funds to recipient countries for activities aimed at protecting the global environment. This operational strategy has been developed to guide the preparation of country-driven initiatives in the GEF's four focal areas: biodiversity, climate change, international waters, and ozone layer depletion.[1] The issues of land degradation, primarily desertification and deforestation, as they relate to each focal area, are also addressed. This strategy will guide the GEF Secretariat and the three Implementing Agencies (the United Nations Development Programme, the United Nations Environment Programme, and the World Bank) in developing work programs, business plans, and budgets and the GEF Council in approving them.

1.2 This strategy incorporates guidance from the relevant Conventions for which the GEF serves as the interim financial mechanism: the Convention on Biological Diversity (CBD) and the Framework Convention on Climate Change (FCCC).[2] It also establishes operational guidance for international waters and ozone activities, the second being consistent with the Montreal Protocol on Substances that Deplete the Ozone Layer and its amendments. Preparation of the strategy drew on a broad consultative process.

1.3 The first chapter defines the mission of the GEF, along with the operational principles on which all its activities will be based. It presents the strategic considerations that the GEF will take into account in fulfilling its mission and provides the framework that will sequence its actions. The chapter also indicates how the GEF will maintain the flexibility needed to respond to new developments and incorporate continuing guidance from the relevant Conventions and the GEF Council. Chapters two to five present the operational strategy specific to each of GEF's four focal areas: biological diversity, climate change, international waters and ozone layer depletion. A discussion of the activities concerning land degradation, primarily desertification and deforestation, as they relate to the focal areas, is integrated into the chapters.

MISSION

1.4 The GEF's mission is to secure global environmental benefits and reduce global environmental risks by promoting cost-effective actions in recipient countries[3] through the provision of new and additional financial resources. In carrying out its mission, the GEF will adhere to key operational principles based on the two Conventions, the GEF Instrument[4], and Council decisions. These principles are summarized in Box 1.1.

BOX 1.1

OPERATIONAL PRINCIPLES

Eight principles will guide the development and implementation of the GEF's work program:

1. For purposes of the financial mechanisms for the implementation of the Convention on Biological Diversity and the United Nations Framework Convention on Climate Change, the GEF will function under the guidance of, and be accountable to, the Conferences of the Parties (COPs)[5].

2. The GEF will provide new and additional grant and concessional funding to meet the agreed incremental costs of measures to achieve agreed global environmental benefits.

3. The GEF will ensure the cost-effectiveness of its activities.

4. The GEF will fund projects that are country-driven and based on national priorities designed to support sustainable development.

5. The GEF will maintain sufficient flexibility to respond to changing circumstances, including evolving guidance of the Conference of the Parties.

6. GEF projects will provide for full disclosure of all nonconfidential information.

7. GEF projects will provide for participation of beneficiaries and affected groups of people.

8. GEF projects will conform to the eligibility requirements set forth in paragraph 9 of the GEF Instrument.

STRATEGIC CONSIDERATIONS

1.5 GEF activities will aim at securing agreed global environmental benefits in the areas of biological diversity, climate change, international waters, and ozone layer depletion. Land degradation issues, primarily desertification and deforestation, as they relate to the four focal areas will also be addressed by GEF activities. *The GEF will not finance activities in the areas of biodiversity and climate change that do not fully conform to the guidance from the relevant Conference of the Parties.*

1.6 GEF activities will be designed so as to:

(a) Be consistent with national and, where appropriate, regional priorities.

(b) Ensure the sustainability of global environmental benefits.

(c) Reduce the risk caused by uncertainty[6].

(d) Complement traditional development funding.

(e) Facilitate effective responses by other entities to address global environmental issues.

These strategic considerations are discussed below.

(a) Be consistent with national and, where appropriate, regional priorities

1.7 GEF activities will be consistent with, and supportive of, the recipient countries' own actions for sustainable development. GEF programs and projects will be *country-driven*,[7] and will be linked with national sustainable development efforts. Public consultation and participation of local communities and other stakeholders will enhance the quality, impact, relevance and national ownership of GEF activities.

1.8 Regional programs and projects will be undertaken only when all participating countries are eligible to receive GEF funding and endorse the GEF activity. The GEF will encourage and strengthen partnerships to address programs at the regional level. Global and interregional projects may be funded for eligible recipient countries or "for other activities promoting the purposes of the Facility."[8] Global programs and projects will be designed to facilitate national-level efforts to achieve global environmental benefits.

(b) Ensure the sustainability of global environmental benefits

1.9 GEF activities will be designed to promote and strengthen:

1. National policies providing adequate incentives for development paths that are sound from a global environmental perspective and contribute to the effective implementation of GEF operations.

2. Institutional arrangements that are supportive of global environmental protection.

3. Human resource development and skills that are necessary to achieve global environmental objectives.

4. Communications and outreach that promote better public understanding of the global environment, mobilize people and communities to protect the global environment, and build support for GEF's objectives, strategy, and programs.

5. Public participation and consultation with major groups,[9] local communities, and other stakeholders throughout project development and implementation.

(c) Reduce the risk caused by uncertainty

1.10 Although there is significant and continuously evolving knowledge relating to global environmental issues, scientific uncertainty is inevitably part of the context in which the operational strategy is set. As enunciated in Principle 15 of the Rio Declaration on Environment and Development, "lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."

1.11 Four means will be pursued to reduce the risks arising from scientific uncertainty:

1. Developing a diverse portfolio.

2. Seeking scientific and technological advice.

3. Working to increase and improve environmental information to support decision-making and action.

4. Paying particular attention to monitoring and evaluation on a programmatic level, including dissemination of information on the results of these efforts, so as to improve subsequent activities.

1.12 A *diverse portfolio* will:

1. Involve a range of approaches that address the need for ongoing innovation, experimentation, and demonstration.

2. Finance programs and projects that address the underlying causes of global environmental deterioration, including economic policy, legal and social issues, institutional weaknesses, and information barriers.

3. Finance actions that provide lessons beyond their immediate impact or provide long-term sustainable global benefits, such as reduction in costs of technologies or demonstration of alternative, environmentally sound, and viable approaches.

4. Finance actions that catalyze complementary actions or have a multiplier effect.

5. Involve a range of project executors from the public, nongovernment and private sectors.

6. Finance programs that advance the scientific and technical capacities in recipient countries to reduce global environmental threats.

1.13 In developing and managing the portfolio of activities, the GEF will seek the best available *scientific and technological advice*. Actions for which the causes, effects, and ameliorative activities are well established will be expedited. The scientific community, in particular the GEF's Scientific and Technical Advisory Panel (STAP),[10] will be consulted routinely. Guidance from the Conference of the Parties to the Convention is expected to include advice and recommendations of the subsidiary scientific bodies of the Conventions.

1.14 *Increased awareness of global environmental issues and improved environmental information* assist in effective decisionmaking and action and are a necessary first step in identifying global benefits. Funding the collection and synthesis of usable information and ensuring its dissemination among decisionmakers, scientists, and the general public are important parts of the GEF's operational strategy. GEF will provide assistance for:

1. Enabling activities, including: inventories, compilation and analysis of existing information, policy analysis, and strategies and action plans to help integrate global environmental objectives and national planning and decisionmaking. Such information also will help countries in preparing communications to the relevant Conventions and developing useful intercountry or interregional information bases.

2. Capacity building, institutional strengthening, and targeted research, including analysis and application of relevant information.

3. Information dissemination and networking among and within countries to help inform decisionmaking on policies, institutional arrangements, investment choices, resource management, and the application of environmentally sound technologies. Systematic sharing and documentation of information and experience on activities to protect the global environment is important in addressing the link between the global environment and national sustainable development programs.

4. Building public awareness in order to ensure public participation and consultation with stakeholders throughout the project cycle.[11]

1.15 Monitoring and evaluation play an especially important role in the GEF for a number of reasons. First, the GEF's new and unique mission in the global environment requires it to develop strategies and projects whose design, although scientifically based, may be more innovative or experimental than that of regular development projects. Second, the GEF is pioneering new institutional relationships among the Bretton Woods and United Nations agencies in partnership with the participant countries, international conventions, NGOs, and other organizations. Third, the emphasis in the early part of the GEF project cycle on "casting the net widely" and the dynamic process of developing operational programs place a premium on continuous learning and improvement. As a consequence, the GEF will place a special importance on the quality of monitoring and evaluation systems and ensure that their findings are disseminated widely.

(d) Complement traditional development funding

1.16 The GEF provides new and additional grant and concessional funding to meet the agreed incremental costs of measures to achieve agreed global environmental benefits.[12] This principle, articulated in the Conventions on biological diversity and on climate change and in the GEF Instrument, has two important ramifications with regard to financing:

1. GEF funding should be used only for incremental costs. Actions by individual countries to achieve sustainable development at the national level can be supplemented by other efforts aimed at securing global environmental benefits. Efforts to secure global environmental benefits may impose additional, costs (i.e., incremental costs) on countries beyond the costs of achieving national development goals. In estimating incremental costs, the GEF will follow the approach approved by the Council.[13] In approving the approach to estimating incremental costs, the Council recognized the need for its flexible application, including the notion of "environmental reasonableness" as a guiding principle so as not to penalize progressive environmental action in recipient countries.

2. The GEF should ascertain that its resources are new and additional, not substitutes for regular sources of development finance. The principle that GEF funds will be additional to the funds required for national sustainable development helps to ensure that scarce resources are not diverted from development financing and to maximize global impact of GEF resources. The GEF will not provide budgetary financing for the staff or activities of international organizations or other international bodies, to fulfill their own mandates, even those concerned with the global environment.

(e) Facilitate effective responses by other entities to address global environmental issues

1.17 The GEF will promote and encourage actions to benefit the global environment beyond those it directly funds:

1. Through integration of GEF work programs with the regular programs of the three Implementing Agencies, GEF resources will complement the funds and assistance they provide to recipient countries. The Implementing Agencies will, in turn, finance and/or help mobilize financing to meet the nonincremental costs of GEF projects.

2. By funding not only government programs but also nongovernmental and private sector initiatives, the GEF will encourage broad-based actions to protect the global environment.

3. The GEF will selectively promote projects that produce global environmental benefits at no, or negative, incremental costs. Such projects may include those that would normally be considered part of an "environmentally reasonable baseline" of activities for the country or region and consequently would not incur incremental costs. In such cases the GEF may facilitate information dissemination and advice, or provide

concessional lending.[14] For projects that provide either lessons beyond their immediate impact or long-term sustainable global benefits, the GEF will help countries reduce the initial financial risk, remove barriers and meet transaction costs, or build markets to an extent that lowers future costs for further application of measures of the same type.

4. The GEF will actively encourage bilateral, regional, and other multilateral organizations and foundations to contribute to or cofinance activities to address global environmental objectives.

5. The GEF will leverage additional finance through collaboration with the private sector.[15]

6. The GEF will support innovative financing approaches to ensure that recurrent costs of funded activities are met without continued GEF support.[16]

7. The GEF will examine the role it might play in facilitating and promoting international cooperation to address global environmental objectives in a multicountry and multiactor context.

PROGRAMMING OF GEF OPERATIONS

1.18 In view of GEF's limited resources and the finite capacities of recipient countries and Implementing Agencies to program activities in any given time frame, the GEF must structure and sequence activities to best achieve global environmental objectives. The sequencing of GEF tasks will be a dynamic process, shaped in part by the evolving nature of guidance from the relevant Conventions and the increased capacity for program development.

1.19 GEF operations will be programmed in three broad, interrelated categories:

(a) Operational programs.

(b) Enabling activities.

(c) Short-term response measures.

Operational Programs

1.20 An operational program is a conceptual and planning framework for the design, implementation, and coordination of a set of projects to achieve a global environmental objective in a particular focal area. It provides an organizing framework for the development of country-driven projects and ensures systematic coordination between the Implementing Agencies and other actors.

1.21 In the focal areas of biological diversity and climate change, operational programs will be developed in accordance with the program priorities approved by the Conference of the Parties to

the Conventions. International waters programs will be developed in accordance with the evolving program priorities determined by the Council. There will be no operational programs for the focal area concerning ozone layer depletion. Activities in this focal area will be focused on short-term response measures and enabling activities consistent with the Montreal Protocol on Substances that Deplete the Ozone Layer and its amendments. Country-driven project concepts and advice of the Scientific and Technical Advisory Panel (STAP) will also contribute to the identification and development of operational programs.

1.22 Each operational program will be described in a short reference document prepared by the GEF that takes into account the advice of STAP and builds on appropriate environmental, economic, and technical assessments and strategies. The operational program document will:

(a) Clarify the program objectives (for example, specify a market, technology, type of measure, or site-specific ecosystem).

(b) Relate the operational program to relevant Convention guidance where appropriate.

(c) Relate the operational program to relevant past and ongoing work of other organizations.

(d) Set out the likely scope of the activities in terms of geographical distribution, time frame, and financial requirements.

(e) Set out the means by which the Implementing Agencies will coordinate their efforts within the GEF and with their regular programs.

(f) Describe the expected roles of investment, capacity building, enabling activities, technical assistance, and targeted research.

(g) Indicate how the sustainability and replicability of the measures supported will be ensured.

(h) Describe how the program will be monitored and evaluated.

1.23 The objectives of operational programs will be met through the development and implementation of projects in recipient countries. Operational programs will be matched with country-driven project opportunities and priorities. Many country-driven project opportunities in support of the objectives of an operational program are likely to be included in national strategies and action plans. As project ideas and concepts are initially explored, one consideration will be whether the project idea contributes to the objectives of an operational program.

1.24 Country-driven project concepts may emerge for which an immediate matching with a GEF operational program does not exist. These concepts will be explored further to determine whether they provide a basis for a new operational program. Flexibility will be an integral element of this strategy so that the GEF may learn from and be responsive to the strategic insights of recipient

countries. The Council, the Conventions, and STAP will provide important guidance in the ongoing process of developing operational programs. Promising project concepts outside the framework of an operational program may be considered for support under short-term response measures. Consideration of individual project concepts outside the framework of an operational program will be guided principally by the urgency of action and cost-effectiveness in relation to the GEF's mission.

1.25 On the basis of guidance from the Conventions, extensive consultations, and technical and scientific review, 10 initial operational programs are proposed. These are listed in box 1.2 and elaborated on in chapters two through five.

BOX 1.2

INITIAL OPERATIONAL PROGRAMS

1.	Biodiversity:	Arid and semi-arid ecosystems
2.	Biodiversity:	Coastal, marine, and freshwater ecosystems (including wetlands)
3.	Biodiversity:	Forest ecosystems
4.	Biodiversity:	Mountain ecosystems
5.	Climate change:	Removing barriers to energy conservation and energy efficiency
6.	Climate change:	Promoting the adoption of renewable energy by removing barriers and reducing implementation costs
7.	Climate change:	Reducing the long-term costs of low greenhouse gas-emitting energy technologies
8.	International waters:	Waterbody-based program
9.	International waters:	Integrated land and water Multiple Focal Area
10.	International waters:	Contaminant-based program

Note: In the focal area of ozone layer depletion, all activities are discussed in the sections on enabling activities and short-term response measures.

Enabling Activities

1.26 Enabling activities -- which include inventories, compilation and analysis of existing information, policy analysis, and strategies and action plans -- represent a basic building block of GEF assistance to countries. They either are a means of fulfilling essential communication requirements to a Convention, provide a basic and essential level of information to enable policy and strategic decisions to be made, or assist planning that identifies priority activities within a country.

Countries thus enabled will have the ability to formulate and direct sectoral and economywide programs to address global environmental problems through a cost-effective approach within the context of national sustainable development efforts. Enabling activities will normally qualify for full cost funding when they are directly related to agreed global environmental benefits and consistent with the Convention's guidance.[17]

1.27 Enabling activities will include:[18]

(a) Inventories of existing studies.

(b) Identification and analysis of options to protect the global environment and their linkage to national sustainable development.

(c) Preparation of a plan, strategy, or program to fulfill commitments under a relevant Convention to protect the global environment.

(d) Preparation of a national communication to a relevant Convention, where appropriate.

1.28 For the above categories of enabling activities, operational guidelines and criteria will be developed in order to:

(a) Clarify the basis of possible GEF support, its complementarity to past and ongoing support, and its focus on the task of preparing a particular strategy, plan, program, or communication.

(b) Set out the scope, sequence, depth, frequency, and cost norms for the envisaged components of such support.

Short-Term Response Measures

1.29 Although the large majority of GEF activities will contribute directly to operational programs or enabling activities, some projects that are unrelated to either of these two categories will be of sufficiently high priority that they may be considered for financing. Such projects would not be expected to yield significant strategic or programmatic benefits as in the case of operational programs, but they would yield short-term benefits at a low cost. For example, climate change projects aimed *solely* at reducing the net emissions of greenhouse gases or urgent measures to conserve an extremely endangered species may be considered under this category. Criteria for selection of short-term response measures in each focal area are included in chapters two through five.

CONCLUSION

1.30 The Council will review and approve a three-year business plan and an administrative budget on an annual basis. The business plan will provide information on existing operational programs,

programs under development, and proposals for new programs. Proposals for new programs may emerge as a result of guidance from the relevant Conventions and the Council, new project concepts, or the advice of STAP. In exercising its oversight and policy functions, the Council will be fully informed of the activities of the Secretariat and the Implementing Agencies in developing and implementing the operational programs, enabling activities, and short-term response measures.

NOTES

1. The *Instrument for the Establishment of the Restructured Global Environment Facility* states that the GEF will provide "grant and concessional funding to meet the agreed incremental costs of measures to achieve agreed global environmental benefits in the following focal areas:

(a) biological diversity;
(b) climate change;
(c) international waters; and
(d) ozone layer depletion.

"The agreed incremental costs of activities concerning land degradation, primarily desertification and deforestation, as they relate to the four focal areas shall be eligible for funding. The agreed incremental costs of other relevant activities under Agenda 21 that may be agreed by the Council shall also be eligible for funding insofar as they achieve global environmental benefits by protecting the global environment in the four focal areas" (paragraphs 2 and 3).

2. Paragraph 6 of the *Instrument for the Establishment of the Restructured Global Environment Facility* provides that "the GEF shall be available to continue to serve for the purposes of the financial mechanism of [the Convention on Biological Diversity and the United Nations Framework Convention on Climate Change] if it is requested to do so by their Conferences of the Parties." The first meeting of the Conference of the Parties to the Convention on Biological Diversity requested that the GEF "continue to serve as the institutional structure to operate the financial mechanism under the Convention on an interim basis." The first meeting of the Conference of the Parties to the United Nations Framework Convention on Climate Change requested that the GEF "continue, on an interim basis, to be the international entity entrusted with the operation of the financial mechanism."

3. Eligibility for GEF funding is determined in accordance with paragraph 9 of the *Instrument for the Establishment of the Restructured Global Environment Facility*.

4. "The GEF Instrument" refers to the Instrument for the Establishment of the Restructured Global Environment Facility.

5. "Conferences of the Parties" refers to the Conference of the Parties established in Article 7 of the Convention on Biological Diversity and the Conference of the Parties established in Article 23 of the U.N. Framework Convention on Climate Change.

6. Risk occurs at four levels in the GEF portfolio:

- First, there is the normal commercial and technical risk associated with any development project. Such risks are addressed through appropriate project design, insurance, and guarantee schemes in the normal course of project development.

- Second, the recipient may experience an additional project risk as a result of opting for a measure that also protects the global environment. For example, there may be increased technical risk when a new renewable energy technology is used as a substitute for a familiar fossil-fuel technology. Such an additional risk is specifically attributable to the GEF involvement and should be addressed by appropriate project design (additional capacity building to manage new systems, recurrent disbursements made on monitored incremental costs, or reimbursement for the increased costs of insurance).

- Third, in some projects the expected global environmental benefits may not materialize or may not be incremental. For example, the GEF may pay the incremental costs of protecting a wetland from development activities in the expectation that this will provide cost-effective protection for the wetland's biodiversity, only to discover many years later that the project agreement had been breached and the wetland drained for an alternative economic use.

- Finally, the GEF runs a portfolio risk in that the measures it has adopted may not prove to be the best or most effective in meeting its overall objectives. For example, if all of the GEF's resources for climate change were devoted to one or two very specific technologies that were expected to reduce greenhouse gases very effectively in the long term, and these technologies failed to become financially self-sustaining as expected, the entire portfolio in climate change would have failed. This type of risk is best handled by having a diverse portfolio. There is a trade-off between the diversity of programs (which reduces portfolio risk) and the strategic concentration of resources within each program (where synergy and scale can increase the chances of market take-off for alternatives and their integration with sustainable development).

7. See Document GEF/C.4/7, "GEF Project Cycle."

8. Paragraph 9(b) of the *Instrument for the Establishment of the Restructured Global Environment Facility* states: "All other GEF grants shall be made available to eligible recipient countries and, where appropriate, for other activities promoting the purposes of the Facility in accordance with this paragraph and any additional eligibility criteria determined by the Council." The Small Grants Programme is an example of a global program that is an "activity promoting the purposes of the Facility."

9. See paragraph 5 of the *Instrument for the Establishment of the Restructured Global Environment Facility*. See also *Agenda 21*, Section III, "Strengthening the Role of Major Groups."

10. The role of the Scientific and Technical Advisory Panel is defined in the STAP terms of reference approved by the Council, Document GEF/C.6/Inf.7, "STAP Terms of Reference".

11. In light of Council guidance on this matter, the Secretariat will prepare for consideration by the Council at its meeting in April/May 1996 a proposal for a GEF policy on public involvement.

12. See paragraph 2 of the *Instrument for the Establishment of the Restructured Global Environment Facility* and Document GEF/C.2/6/Rev.2, "Incremental Costs and Financing Modalities."

13. This approach is spelled out in Document GEF/C.2/6/Rev.2.

14. Paragraph 9(c) of the Instrument provides that "GEF concessional financing in a form other than grants that is made available within the framework of the financial mechanism of the conventions referred to in paragraph 6 shall be in conformity with eligibility criteria decided by the Conference of the Parties of each convention, as provided under the arrangements or agreements referred to in paragraph 27. GEF concessional financing in a form other than grants may also be made available outside those frameworks on terms to be determined by the Council."

15. See paragraph 28 of the Instrument. An information paper on how the GEF may best promote private sector activities will be presented to the Council for comment in October 1995.

16. A policy paper on financial policy, including financing modalities, will be considered by the Council in April/May 1996.

17. The term "enabling activities" has been defined in the context of the guidance to the GEF from the Conference of the Parties to the Framework Convention on Climate Change. The concept can usefully be extended to the biodiversity and ozone layer depletion focal areas.

18. The scope of work in biodiversity and climate change will be in accordance with the guidance of the respective Conference of the Parties and will continue to evolve as such guidance is developed by the Parties.

CHAPTER TWO

BIOLOGICAL DIVERSITY

2.1 Biodiversity is a source of significant economic, aesthetic, health, and cultural benefits, which form the foundation for sustainable development. Although estimates vary,[1] there is general scientific consensus that the world is becoming less biologically diverse in terms of genes, species, and ecosystems. However, the role of biological diversity in the sustainable functioning of the biosphere is not well understood. There is little understanding of the social, economic, or ecosystem consequences of a less biologically diverse world, and scientific knowledge is limited. Scientists estimate that less than 15 percent of all species have been described.[2]

2.2 Rapid loss of biodiversity poses a global threat to human well-being. The scale of human impacts on biological diversity is increasing exponentially primarily because of worldwide patterns of consumption, production, and trade; agricultural, industrial, and settlements development; and population growth.

2.3 Biodiversity is not equally distributed throughout the world.[3] Rates of biodiversity loss vary across ecosystems, and ecosystems vary in their level of species richness. For example, tropical ecosystems are estimated to house between 50 and 90 percent of total species.[4] Neither the economic nor the ecosystem value of biodiversity resources is well understood. In particular, there is insufficient knowledge of the interdependence of species within ecosystems and the impact of the extinction of one species on others. Reducing the rate of biodiversity loss and conserving existing biodiversity as a basis of sustainable development remain major global challenges.

2.4 Adoption of the Convention on Biological Diversity (CBD) as an instrument to address biodiversity conservation and sustainable use recognizes the intrinsic value of biological diversity and its importance for the evolution and sustenance of life support systems of the biosphere. The CBD expresses the Parties' concern that biological diversity is being significantly reduced by certain human activities and notes that it is vital "to anticipate, prevent and attack the causes of significant reduction or loss of biological diversity at source."[5] The CBD also states that "where there is a threat of significant reduction or loss of biological diversity, lack of full scientific certainty should not be used as a reason for postponing measures to avoid or minimize such a threat."[6]

2.5 The GEF operates as a mechanism for international cooperation for the purpose of providing new and additional grant and concessional funding to meet the agreed incremental costs of measures to achieve agreed global environmental benefits in biological diversity. Global environmental benefits will be obtained to the extent that the objectives of the CBD are met. These include reduced risks of global biodiversity loss, the enhanced protection of ecosystems and the species they contain, and increased sustainability in the use of biodiversity components.

2.6 The GEF's objectives in biological diversity derive from the objectives of the CBD: "the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including by appropriate

access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding."[7] The development of GEF activities will closely follow the guidance of the Conference of the Parties (COP) to the CBD.

CONVENTION GUIDANCE

2.7 The GEF operational strategy in biological diversity incorporates the policy guidance of the COP to the CBD.

Convention context

2.8 The COP designated the GEF to serve as the institutional structure to operate the financial mechanism of the CBD on an interim basis.[8] At its first meeting,[9] the COP provided the GEF with guidance on policy, strategy, program priorities, and eligibility criteria,[10] included in the annex to this chapter. Thus, the GEF will only fund projects that are fully consistent with the Convention guidance. This operational strategy fully conforms to the current guidance from the COP to the CBD and is expected to evolve to accommodate future guidance.

Non-Convention context

2.9 The GEF may fund activities in any eligible country. However, only developing-country Parties are eligible to receive funding through the financial mechanism of the Convention. When the GEF provides assistance outside the financial mechanism, such assistance will be fully consistent with the guidance provided by the COP to the CBD.

STRATEGIC CONSIDERATIONS

2.10 The main strategic considerations guiding GEF-financed activities to secure global biodiversity benefits are: (a) integrating the conservation and sustainable use of biodiversity within national and, as appropriate, regional sustainable development plans and policies; (b) helping to protect and sustainably manage ecosystems through targeted and cost-effective interventions; (c) integrating efforts to achieve global benefits in other focal areas, where feasible, and in the cross-sectoral area of land degradation, primarily desertification and deforestation; (d) developing a portfolio that encompasses representative ecosystems of global biodiversity significance; and (e) GEF activities will be targeted and designed to help recipient countries achieve agreed biodiversity objectives in strategic and cost-effective ways.

2.11 Sustainable achievement of global biodiversity benefits will greatly depend on the extent to which GEF activities are country-driven and are related to appropriate national policy frameworks and plans of sectoral, economic, and social development.

2.12 Where feasible and cost-effective, activities will be designed to contribute to global environmental benefits in other focal areas and in the cross-sectoral area of land degradation. For

example, actions to sequester carbon and minimize land degradation may offer opportunities for biodiversity conservation, and international waters activities may offer opportunities for integrating aquatic biodiversity components.[11]

2.13 Dryland ecosystems contain a significant endowment of plant and animal species. Dryland species exhibit notably restrictive geographical ranges and high endemism and have a wide range of morphological, physical, and chemical adaptations to their harsh environment. Drylands also are the center of origin of many important food crops (for example, wild wheat, lentil, barley, olive, and pistachio); are a source of important commercial and industrial products (for example, gums, resins, waxes, oils, and biocides); and provide critical habitat for wildlife and ecosystem diversity. Forests harbor biodiversity; and deforestation through agricultural expansion, urban expansion, unsustainable direct extraction, and fuelwood collection, for example, causes land degradation and biodiversity loss. The GEF will fund activities addressing land degradation issues as they relate to biodiversity issues that:

(a) Protect biodiversity and promote sustainable use in arid and semi-arid ecosystems.

(b) Prevent deforestation and promote sustainable management of forests.

Portfolio considerations

2.14 A portfolio that provides for a high level of representativeness of global ecosystems,[12] especially in tropical regions, will be developed. It is difficult to define a precise sampling technique that would provide for a globally representative biodiversity portfolio, since: (a) there is uncertainty about the level of species richness and its value within ecosystems; and (b) relationships between ecosystems are uncertain. Therefore, a portfolio will be developed from a broadly representative base of globally important ecosystems, while recognizing the potential importance of particular species and endemism-rich ecosystems.[13] Within representative ecosystems, particular attention will be given to the degree of threat (for example, for coastal and marine resources),[14] level of vulnerability (for example, for arid and semi-arid areas, mountain regions, and freshwater systems),[15] and priority status at national and regional levels.[16]

2.15 GEF's biodiversity operations will be programmed in three categories: (a) operational programs for long-term protection and sustainable use of biodiversity, where the bulk of GEF funding will be concentrated; (b) enabling activities, prepared and scheduled in accordance with operational criteria; and (c) short-term response measures that offer cost-effective opportunities to conserve and sustainably manage biodiversity. All GEF-financed biodiversity activities will promote the utilization of local and regional expertise.

OPERATIONAL PROGRAMS

2.16 The GEF will develop operational programs based on ecosystems. There are compelling scientific reasons for addressing biodiversity management within the framework of ecosystems. Ecosystem management allows the integration of scientific knowledge of ecological relationships with that of sociopolitical conditions and values to achieve biodiversity protection and sustainable

management. The ecosystem approach also permits the management of biodiversity by taking into account the interrelationships among its components, including species and gene pools. Protection and sustainable management of ecosystems require a long term commitment and a range of coordinated policy and project interventions at a national level, a regional level, or both.

2.17 Operational programs for long-term biodiversity protection and sustainable use will be initially developed for (a) arid and semi-arid ecosystems; (b) coastal, marine, and freshwater ecosystems; (c) forest ecosystems; and (d) mountain ecosystems.

2.18 These ecosystems were selected in full conformity with the COP guidance. They take into account the considerations of:

(a) Making systematic progress in securing global biodiversity objectives on the basis of a set of representative and complementary ecosystems of global biodiversity significance.

(b) Providing a practical organizing framework for the design and implementation of cohesive systems of national actions involving coordination of international, intersectoral, and interagency activities to achieve agreed global biodiversity benefits.

(c) Providing a basis for the further development of activities that will yield strategic and programmatic impacts even beyond the results achieved through GEF-supported activities.

(d) Providing a workable basis for programmatic monitoring and evaluation of the effectiveness of GEF's biodiversity activities.

2.19 Additional operational programs could be developed for other ecosystems in conformity with the guidance of the COP to the CBD.

Arid and Semi-Arid Ecosystems

2.20 Activities in this operational program will focus on the conservation of endemic biodiversity in the dryland ecosystems, particularly in Africa, where biodiversity is threatened by increased pressure from more intensified land use, often leading to land degradation. GEF-financed activities will emphasize the prevention and control of land degradation for biodiversity conservation, including the management of freshwater systems, in countries experiencing serious land degradation. Activities will demonstrate integrated approaches to the conservation of representative natural habitats and ecosystems through an effective system of protected areas, introduction of sustainable land use systems, and strategic interventions to rehabilitate degraded areas.

Coastal, Marine, and Freshwater Ecosystems

2.21 Activities in this operational program will concentrate on the conservation and sustainable use of biodiversity in the tropical coastal, wetland, mangrove, estuarine, marine, and freshwater ecosystems. Projects will involve integrated approaches to coastal area development and lakes and

rivers management and will strengthen the network of protected areas to conserve marine and freshwater biodiversity. The needs of tropical island ecosystems will receive particular attention. Several activities in this program will be implemented in conjunction with the international waters focal area and will involve international cooperation at the regional level.[17]

Forest Ecosystems

2.22 Activities in this operational program will involve the establishment and strengthening of systems of protected areas and demonstration and application of best practices in integrated land management in agricultural and forest landscapes, focusing on tropical areas at risk. Particular attention will be given to demonstration and application of techniques to conserve wild relatives of domesticated plants and animals for the sustainable use of biodiversity, conservation of areas of importance for migratory species, and strengthening of protected area networks. Regional projects involving international cooperation will also be supported. Sizable funds from sources other than the GEF are currently devoted to protection and management of forest ecosystems. GEF funds will complement ongoing efforts, as appropriate, and help to scale up and replicate successful initiatives focusing on global objectives, promote best practices, and help design and implement cohesive programmatic approaches.

Mountain Ecosystems

2.23 Activities in this operational program will initially address the conservation and sustainable use of biodiversity in the Mesoamerican, Andean, East African, and Himalayan regions and the mountainous regions of the Indochinese peninsula -- all of which are under increasing human pressure and imminent threat of degradation. Through these activities, the GEF will seek to establish sustainable land use practices on mountain slopes in order to protect representative habitats and strengthen the network of representative protected areas in the alpine, mountain grassland, montane forest zones, and freshwater systems. Activities that link mountain ecosystems with lowland ecosystems through corridors and those that demonstrate and apply best practices for integrated landscape management will be included. Regional activities involving cooperative management of chains of mountains and river basins will also receive support.

Considerations in Developing Operational Programs

2.24 Within the framework of each operational program, country-driven, site-specific activities will be developed. These will be based both on information on country-level or regionally based activities currently underway or planned and on key strategic and policy issues involved in protecting and sustainably managing the ecosystem at the particular site. Each operational program will identify key actions to be undertaken on the basis of country-based information and dialogue. Each operational program will define how the Implementing Agencies will coordinate their efforts both in managing GEF activities and in seeking opportunities to support the objectives of the operational program through their regular programs. Each operational program will provide a framework for establishing an appropriate balance among institutional strengthening (including technical assistance), investment, and targeted research. Specific activities will differ depending on the ecosystems concerned and site-specific conditions.

2.25 Each operational program will encompass, in an integrated manner, two types of measures that are central to biodiversity: (a) long-term protection and (b) sustainable use. Other considerations that will guide the development of activities in each operational program, as appropriate, are: (c) underlying causes and policies, (d) stakeholder involvement, and (e) targeted research.

(a) Long-term biodiversity protection

2.26 Initial emphasis of operational programs will be placed on in situ activities within and adjacent to the designated protected areas of biological importance. Representativeness and complementarity of ecosystems will be sought. These efforts will take into account national priority protected areas identified pursuant to Article 7 of the Convention, as well as scientific assessments.[18] However, countries may seek assistance to demarcate, identify, and conserve other potentially important biodiversity reserves, including significant cultural heritage elements.

2.27 Conservation activities will be comprised of direct management interventions, planning of resource use as well as promotion of sustainable development alternatives to ensure that livelihoods can be secured in and around the protected areas. Activities will seek to incorporate protected areas into larger landscapes or seascapes. In addition, attention will be given to integrated conservation and development projects to avoid creating "magnets" for immigration in buffer zones and exacerbating threats to biodiversity in the protected areas.

2.28 Activities within the framework of operational programs to secure long-term biodiversity protection will include:

1. Demarcating, gazetting, strengthening, and expanding of protected areas.

2. Establishing long-term funding mechanisms, including trust funds, to ensure provision for recurrent costs.

3. Developing integrated conservation and development projects around protected areas.

4. Creating participatory schemes for natural resource management, including that in buffer zones, by local communities, indigenous groups, and other sectors of society, consistent with biodiversity conservation and sustainable use.

5. Developing demonstration projects linked to alternative livelihoods for local and indigenous communities.

6. Applying technology (such as geographical information systems) for biological inventorying, rapid assessment, impact measurement, and gap analysis in integrated planning and managen nt of designated protected areas.

(b) Sustainable Use of Biodiversity

2.29 The success of biodiversity conservation efforts will depend on how well the overall landscape is managed. It is simply not possible to conserve all species in a region by using conservation areas alone. Biodiversity conservation and sustainable use must also be achieved outside the designated conservation areas, and management of protected areas must be integrated into the management of the natural and modified surrounding areas. A range of uses is possible -- from full protection on strict reserves through various forms of multiple use, with conservation easements, to full-scale use such as intensive agriculture, forestry, livestock production, and urban development. Restoration and rehabilitation of unique habitats under threat in areas of high diversity or endemism will also contribute to conservation and sustainable use. Activities that involve biodiversity management within the productive sectors of an economy are likely to lead to long-term sustainability since they will help address the underlying causes of biodiversity loss. Several sectors, such as forestry, agriculture, fisheries, and tourism, draw on biodiversity assets.

2.30 Activities for conservation and sustainable use of biological resources will be developed within national policy and regulatory frameworks and within the context of the operational programs. They will include:

1. Integration of biodiversity conservation and sustainable use objectives into land use and resource use management plans.

2. Establishment of regulatory frameworks and incentive systems to minimize the harmful impact of economic activities on natural resource use.

3. Promotion of sustainable production and use of natural products, such as nontimber forest products, wild relatives of domesticated species, and agrobiodiversity-related products, including the development and implementation of sustainable harvesting and marketing regimes.

4. Development of environmentally sustainable nature-based tourism.

5. Participatory schemes for sustainable natural resource management, including that in buffer zones, by local communities, indigenous groups, and other sectors of society.

6. Integrated pilot projects to provide alternative livelihoods to communities, consistent with biodiversity conservation and sustainable use.

7. Facilitation of access to, transfer of, and cooperation for joint development of, technology for sustainable management of biodiversity resources.

2.31 Sustainable use of biological resources is a prerequisite for their long-term conservation. However, in most cases, it is not possible to accurately predict the impacts on habitats or species of innovative approaches to conservation and sustainable use of biodiversity. In addition, the risks of introducing perverse incentives that lead to overharvesting and destruction of natural resources are significant. Activities that involve harvesting of wild resources (for example, wildlife, nontimber

forest products) pose special risks. Therefore, sustainable use activities will require close monitoring of: (a) species selection; (b) information on current occurrence, density, and other demographic parameters of biological resources, including yield studies and regeneration surveys; and (c) actual impacts of harvesting, so that harvesting levels can be adjusted as needed.

(c) Underlying causes and policies

2.32 Biodiversity loss occurs through direct and indirect causes. These causes are typically multiple and synergistic. They involve complex interactions of demographic, social, ecological, economic, and cultural factors.[19] The levels of causality may include proximate causes (where human action, such as land clearing, directly induces biodiversity loss), intermediate causes (such as inappropriate economic policies), and ultimate causes (such as population growth coupled with low standards of living, which increases pressure on natural resources).[20]

2.33 Addressing all underlying causes of biodiversity loss is beyond the GEF's mandate and ability.[21] Yet recipient countries need to ascertain the range and importance of causal factors and their role in biodiversity loss and its amelioration. For example, appropriate adjustments in economic and social development policies may offer cost-effective, long-term solutions to biodiversity protection problems.[22] Although the GEF will concentrate its efforts on addressing the proximate and intermediate causes of biodiversity loss, it will, through the Implementing Agencies' regular country assistance and awareness-building programs, facilitate efforts to address the ultimate causes of biodiversity loss.

2.34 Within the context of operational programs, GEF-financed activities will include:

1. Identification and analysis of major causes (proximate, intermediate, ultimate) of biodiversity loss, activities to build awareness of these causes, and assessment of feasible actions to address them.

2. Application of analytical tools for decisionmaking (for example, valuation, indicators, impact assessment); promotion of partnerships to address the underlying causes; dissemination and systematic sharing of information, including on best practices; and incorporation of biodiversity concerns in the mainstream activities of Implementing Agencies.

3. Incremental investments and technical assistance to help implement remedial measures, including capacity building, shifts in economic and social policy, and introduction and strengthening of legal, institutional, and regulatory systems; and to promote the integration of biodiversity conservation in agriculture, forestry, fisheries, wildlife and water management, tourism, and other relevant sectors.

4. Introduction of innovative measures, including economic incentives, for the conservation and sustainable use of biodiversity.[23]

(d) Stakeholder Involvement

2.35 Issues of poverty, social development, sustainable livelihoods, and access to common property resources are closely linked to biodiversity conservation and sustainable use. Participation of affected stakeholders[24] is of central importance, especially in the case of communities that reside inside protected areas and their immediate surroundings. Effective involvement of local people in GEF's biodiversity activities must be based on knowledge of their social and economic needs and their impacts on biological resources. Important factors in designing strategies for effective participation of stakeholders in global biodiversity objectives include access to land and other resources; governance systems relating to conflict management; distribution of benefits and accountability for conserving key resources; and demographic composition, gender roles, and social organization processes that influence human and environmental interactions.

2.36 GEF activities will incorporate the lessons learned from the experience of implementing participatory approaches to community-based management of biodiversity projects. These include integrated conservation and development projects in which social needs are integrated into project design; comanagement of resources, through contracts or negotiations with governments that define each stakeholder's responsibilities in managing the resource; and devolution of management to local groups and nongovernmental organizations (NGOs). Local, national, and international NGOs have played important roles by providing needed expertise in facilitating stakeholder participation and conducting scientific and technical studies, inventories, social assessments, and community-based outreach.

(e) Targeted Research

2.37 The GEF will fund targeted research, including information collection, analysis, and dissemination, only in the context of the operational programs. Targeted research will be guided by the following considerations:

1. Since biodiversity is highly site-specific, baseline research, inventorying, and monitoring will be supported in recipient countries to help develop site-specific activities within the framework of operational programs.

2. The GEF could play a facilitating or complementary role in cofunding strategically significant efforts in applied biodiversity research in recipient countries to help develop activities to achieve Convention objectives.

3. Support is needed in many recipient countries in the application of analytical tools and methodologies, including the use of modern information technologies, to monitor biodiversity and to plan for its conservation and sustainable use.[25]

2.38 Potential areas for targeted research in biodiversity could include, for example, implementation of rapid (ecological/biological) assessment methods, technology applications for sustainable resource use, incorporation of social dimensions in the management of protected areas, and assistance to existing biodiversity research and monitoring institutions.[26] GEF funds will not

be used to fund basic research or to create new research institutions. The GEF also will not fund the recurrent costs of research.

ENABLING ACTIVITIES

2.39 The concept of "enabling activities" has not been formally adopted by the COP of the CBD, although many enabling activities, as described generically in the first chapter, are of direct relevance to biodiversity and are recognized as priority activities by the CBD.[27]

2.40 Enabling activities in biodiversity are those that prepare the foundation to design and implement effective response measures to achieve Convention objectives.[28] Enabling activities in this focal area will assist recipient countries to develop national strategies, plans, or programs referred to in Article 6 of the CBD, and to identify components of biodiversity together with processes and activities likely to have significant adverse impacts on conservation and sustainable use of biodiversity pursuant to Article 7 of the CBD. They will normally involve the review and assessment of existing information and will assist a recipient country to gain a better understanding of the nature and scope of its biodiversity assets and issues as well as a clearer sense of the options for the sustainable management and conservation of biodiversity.[29] Enabling activities include supporting country-driven activities for taking stock of or inventorying biodiversity based on national programs and relying on existing studies, without new primary research; identifying options and establishing priorities to conserve and sustainably use biodiversity; preparing and developing biodiversity planning exercises, such as national strategies, action plans, and sectoral plans; and disseminating of information through national communications to the CBD.[30]

2.41 Many countries already have a significant quantity of information and a number of assessments of biodiversity. In addition, there exist a variety of approaches and practices for planning biodiversity conservation and sustainable use. It is essential to promote synergy and coordination among such initiatives within the recipient countries and among donors. When enabling activities are aimed at providing countries with the basic information on which to act, they will normally be regarded as incremental and will be funded on the basis of full cost reimbursement. Support to further develop in-country and sectoral plans, programs, and activities in light of global objectives will be based on incremental cost financing.

2.42 As a follow-up to enabling activities, some Parties may require capacity building to implement agreed activities, to establish or strengthen institutional and legal frameworks, or to undertake action-oriented research to conserve biodiversity. Capacity building for such follow-up will be undertaken within the context of operational programs.

2.43 Operational criteria will be developed:

(a) To set out the scope, sequence, depth, and typical cost norms for various components of enabling activities in biodiversity.

(b) To outline recommended processes to prepare, discuss, and implement enabling activities within a recipient country[31].

(c) To delineate the requirements for provision of GEF support, its complementarity to existing and ongoing support, and its focus on the task of preparing particular plans or communications in relation to the Convention.

SHORT-TERM RESPONSE MEASURES

2.44 Proposed activities that are not an integral part of an operational program but are still cost-effective or that enable the GEF to respond to an urgent need or seize a promising country-driven opportunity in a timely manner are also eligible for support. It would be unwise to reject such activities merely because they are not part of an agreed operational program if their costs are relatively low, the outcomes relatively certain, and their urgency or priority unchallenged.

2.45 The operational criteria to guide consideration of proposed activities under short-term response measures include:

(a) **Likelihood of success.** Projects should demonstrate that they are well-designed and feasible. Supporting assessments of technical quality and relevance and conducive country policy and program frameworks will be required, and STAP advice will be sought.

(b) **Cost effectiveness.** Few useful quantifiable norms of cost-effectiveness exist for biodiversity activities; in their absence, information will be provided to assess the nature and significance of the costs involved in relation to the expected biodiversity benefits.

(c) **Degree of threat, vulnerability or urgency.** Some interventions may be considered extremely urgent on the basis of known imminent threats to a species or ecosystem (for example, tropical forests, coastal and marine biodiversity[32]) or degree of vulnerability (for example arid, semi-arid, and mountainous regions[33]).

(d) **Opportunism.** A GEF intervention may be considered opportune in the face of a fortuitous combination of factors -- for example, emergence of a conducive national policy environment for international collaboration to address an urgent or emergent problem at the national or regional level.

(e) **Demonstration value.** Innovative approaches (for example, innovative use of economic incentives[34]) to implementing biodiversity activities may need to be tested.

2.46 Short-term response measures, like activities developed within the framework of operational programs, will be country-driven and consistent with national plans and strategies, may involve establishment of systems to provide for recurrent costs, and will be supported by measures to ensure the sustainability of biodiversity benefits.

2.47 Eligible activities under short-term response measures could include, for example, those with a focus on threatened or endangered species or ecosystems, actions to reduce immediate threats to migratory species, and programs to facilitate implementation of unforeseen opportunities for national action and international cooperation to reduce specific risks of biodiversity loss. Over time, some short-term response measures may also help the development of new operational programs.

CONCLUSION

2.48 The operational strategy for biodiversity sets out a process-oriented approach to implementing the GEF's mandate in biodiversity, in full conformity with the guidance provided by the COP of the CBD. It provides a framework for the development and implementation of GEF-financed activities to allow recipient countries to address the complex global challenge of biodiversity conservation and sustainable use. It also provides a framework for systematic monitoring and evaluation of the effectiveness of GEF-financed activities.

POLICY, STRATEGY, PROGRAMME PRIORITIES AND ELIGIBILITY CRITERIA FOR ACCESS TO AND UTILIZATION OF FINANCIAL RESOURCES OF THE CONVENTION ON BIOLOGICAL DIVERSITY

I. Policy and Strategy

Financial resources should be allocated to projects that fulfill the eligibility criteria and are endorsed and promoted by the Parties concerned. Projects should contribute to the extent possible to build cooperation at the sub-regional, regional and international levels in the implementation of the Convention. Projects should promote utilization of local and regional expertise. The institutional structure should over time assist all eligible countries to fulfil their obligations under the Convention. Policy and strategy may be revised, as necessary, by the Conference of the Parties.

II. Eligibility Criteria

Only developing countries that are Parties to the Convention are eligible to receive funding upon entry into force of the Convention for them. In accordance with the provisions of the Convention, projects that seek to meet the objectives of conservation of biological diversity and sustainable use of its components are eligible for financial support from the institutional structure.

III. Programme Priorities

1. The conservation of biological diversity and sustainable use of its components is one of the key elements in achieving sustainable development and therefore contribute to combating poverty.

2. All the actions contemplated in the Convention will have to be carried out at the national and international level, as appropriate. However, for the purposes of giving direction to the interim structure operating the financial mechanism, a list of programme priorities is given in paragraph 4 below. The list may be revised by the Conference of the Parties, as necessary.

3. Programme priorities should promote utilization of regional and local expertise and be flexible to accommodate national priorities and regional needs within the aims of the Convention.

4. The programme priorities are as follows:

a) Projects and programmes that have national priority status and that fulfil the obligations of the Convention;

b) Development of integrated national strategies, plans or programmes for the conservation of biological diversity and sustainable use of its components in accordance with Article 6 of the Convention;

c) Strengthening conservation, management and sustainable use of ecosystems and habitats identified by national governments in accordance with Article 7 of the Convention;

Note: This annex reproduces verbatim Document UNDP/CBD/COP/1/17, annex I, pages 33 - 34.

d) Identification and monitoring of wild and domesticated biodiversity components, in particular those under threat, and implementation of measures of their conservation and sustainable use;

e) Capacity-building, including human resource development and institutional development and/or strengthening, to facilitate the preparation and/or implementation of national strategies, plans for priority programmes and activities for conservation of biological diversity and sustainable use of its components;

f) In accordance with Article 16 of the Convention, and to meet the objectives of conservation of biological diversity and sustainable use of its components, projects which promote access to, transfer of and cooperation for joint development of technology;

g) Projects that promote the sustainability of project benefits; that offer a potential contribution to experience in the conservation of biological diversity and sustainable use of its components which may have application elsewhere; and that encourage scientific excellence;

h) Activities that provide access to other international, national and/or private sector funds and scientific and technical cooperation;

i) Innovative measures, including in the field of economic incentives, aiming at conservation of biological diversity and/or sustainable use of its components, including those which assist developing countries to address situations whe opportunity costs are incurred by local communities and to identify ways and means by which these can be compensated, in accordance with Article 11 of the Convention;

j) Projects that strengthen the involvem : of local and indigenous people in the conservation of biological diversity a... : sustainable use of its components;

k) Projects that promote the conservation and sustainable use of biological diversity of coastal and marine resources under threat. Also, projects which promote the conservation of biological diversity and sustainable use of its components in other environmentally vulnerable areas such as arid and semi-arid and mountainous areas;

l) Projects that promote the conservation and/or sustainable use of endemic species;

m) Projects aimed at the conservation of biological diversity and sustainable use of its components which integrate social dimensions including those related to poverty.

NOTES

1. See World Resources Institute, World Conservation Union, and United Nations Environment Programme, especially chapter 2, A 1992 report by the United Nations Environment Programme, *"Global Biodiversity Strategy: Guidelines for Action to Save, Study, and use Earth's Biotic Wealth Sustainably and Equitably:.*

"Global Biodiversity Assessment," notes that the Earth is losing species at rates 50 to 100 times higher than "background" rates, and that 5 to 20 percent of vertebrates and plants are now threatened by extinction.

2. *"Global Biodiversity Assessment"* notes that the Earth is home to an estimated 13 million species, of which only about 1.7 million have been described.

3. - Global Biodiversity Assessment
   - World Conservation Monitoring Centre (WCMC), Global Biodiversity 1992; Chapman and Hall, UK.

4. *"Global Biodiversity Strategy"* chapter 2.

5. Preamble to the Convention on Biological Diversity, 1994.

6. Preamble to the Convention on Biological Diversity, 1994.

7. Convention on Biological Diversity, Article 1.

8. Decision I/2, "Financial Resource and Mechanism," Report of the First Meeting of the Conference of the Parties to the Convention on Biological Diversity, UNEP/CBD/COP/1/17, February 28, 1995.

9. The first meeting of the Conference of the Parties was held in Nassau, Bahamas, November 28-December 9, 1994.

10. "Policy, Strategy, Programme Priorities and Eligibility Criteria for Access to and Utilization of Financial Resources of the Convention on Biological Diversity" (UNEP/CBD/COP/1/17; Annex 1, pp. 33-34), referred to hereafter as "Criteria." The full text is included as an annex to this chapter.

11. Biodiversity concerns cut across the GEF focal areas and cross-sectoral issues:

   (a) Climate change examples include programs that increase reforestation with indigenous plant species for carbon sequestration in ecologically important areas.
   (b) International waters examples include actions seeking prevention of ecological degradation of critical water habitats (wetlands, estuaries, lakes); programs to prevent the introduction of exotic species; and projects that address over exploitation of key marine environments such as coral reefs or of specific species through unsustainable harvesting practices.
   (c) Ozone depletion examples include the impacts of methyl bromide-based fungicides (ozone-depleting substances) and their impact on biodiversity.
   (d) Land degradation examples include prevention of land degradation and the link with deforestation and unsustainable agricultural practices.

12. At its first meeting, the Conference of the Parties identified as a program priority "strengthening conservation, management and sustainable use of ecosystems and habitats identified by national Governments, in accordance with article 7 of the Convention."

Article 7 of the Convention provides that a contracting party is to identify components of biological diversity important for its conservation and sustainable use having regard to the indicative list of categories set down in Annex I.

The criteria set down in Annex I of the Convention are:

"1. Ecosystems and habitats: containing high diversity, large numbers of endemic or threatened species, or wilderness; required by migratory species; of social, economic, cultural or scientific importance; or, which are representative, unique or associated with key evolutionary or other biological processes;

2. Species and communities which are: threatened; wild relatives of domesticated or cultivated species; of medicinal, agricultural or other economic value; or social, scientific or cultural importance; or importance for research into the conservation and sustainable use of biological diversity, such as indicator species; and

3. Described genomes and genes of social, scientific or economic importance."

13. There has been considerable academic debate on methodologies to determine relative priorities in global biodiversity, and no consensus has yet been reached. Further efforts will be required in this field, and STAP could be requested to play a role on advising the GEF Secretariat on the validity of priority-setting methods and approaches.

14. Criteria, 4 (k).

15. Criteria, 4 (k).

16. Criteria, paragraphs 3 and 4(a).

17. The recent (1995) Great Barrier Reef Marine Park Authority/World Bank/IUCN volumes of *A Global Representative System of Marine Protected Areas* will provide significant input to this operational program.

18. Although there is no universally agreed classification for establishing the global importance of protected areas, a number of reference materials identify such sites. Efforts could be focused on sites listed in one or more of the following: Directory of Wetlands of International Importance (RAMSAR); World Heritage Sites (as included in the World Heritage Convention); Biosphere Reserves (UNESCO) of international importance and as also recorded by the World Conservation Monitoring Centre (WCMC), *Global Biodiversity*, 1992; *Bird Areas of International Importance* (Bird-Life International); *Centers of plant diversity*, IUCN, 1987, IUCN Threatened Plants Unit, Kew, U.K.; and *Global Biodiversity*, pp. 66-67; and Regions of Diversity of Crop Plants (WCMC, pp. 338-42). These efforts, while useful in their own right, point out the need to strengthen an overall system for classifying and assessing the global significance of biodiversity sites.

19. See, for example, *"Economics and the Conservation of Global Biological Diversity"*: Katrina Brown, David Pearce, Charles Perrings, and Timothy Swanson. Working Paper Number 2 Global Environment Facility. Chapter 3, *"The Economic Causes of Biodiversity Erosion"* provides a succinct summary of the key variables affecting biodiversity loss. See also figure 5.1, which provides a schematic summary of factors affecting global biological diversity.

20. R. Cervigni, *"Incremental Cost of Biodiversity Conservation"*, CSERGE, 1994.

21. For example, it is unlikely that the GEF will fund population programs, direct antipoverty interventions, or potable water schemes even if these were identified as causal factors affecting the deterioration of biodiversity. Such programs would normally be of high national priority and be an integral part of national economic and social development plans and policies.

22. The removal or reduction of economic distortions that are generally beneficial to the economy of a country in question may simultaneously benefit the environment and biodiversity. Case study work at the country level would be able to assess the likely impact of removing economic distortions. Numerous publications testify to this, but see especially

D.W. Pearce and J. Warford, *World Without End: Environment, Economics and Sustainable Development*, (New York: Oxford University Press, 1993).

23. "Criteria", paragraph 4(i).

24. Article 8(j): "Subject to its national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices;"

25. This is suggested as an enabling activity by the Inter-Agency Task Force on Biodiversity.

26. The UNEP, in consultation with STAP, is preparing a draft paper on targeted research relating to GEF activities.

27. See the Convention on Biological Diversity: Preamble; Articles 6, 7(b), 12, and 18(2); and CBD guidance (footnote 7): 4(c), (h), and (j).

28. *Final Report of the Meeting of the Task Force on GEF Enabling Activities under the CBD*, April 5-6, 1995, Nairobi. The task force identified a fourth category of activity: "enabling activities for general use rather than country-specific (for example, development of guidelines for biodiversity planning.") However, such activities also relate to targeted research and, as such, will be reviewed in that context.

29. The GEF Secretariat has established an Inter-Agency Task Force on Biodiversity. It reviews all biodiversity project and activity proposals and undertakes ad hoc review work. The task force was convened in April 1995, to specifically review enabling activities in biodiversity. The CBD Secretariat was invited to chair the meeting, which was hosted by the UNEP on April 5-6, 1995. It reviewed (a) the definition and scope of enabling activities in biodiversity; (b) systems needed to ensure programmatic cohesion and cost effectiveness; and (c) preliminary assessments of norms and standards to be applied in programming resources.

30. Convention on Biological Diversity, Article 26.

31. The GEF will encourage countries to disseminate findings widely within the country and to encourage discussion and debate among all major stakeholders. GEF consultation and participation guidelines (once approved by Council) will provide a framework for such activities.

32. "Criteria", paragraph 4(k).

33. "Criteria", paragraph 4(k).

34. "Criteria", paragraph 4(i).

CHAPTER THREE

CLIMATE CHANGE

3.1 Human activities have been substantially increasing the atmospheric concentrations of greenhouse gases. These increases enhance the natural greenhouse effect and will result on average in additional warming of the Earth's surface and lower atmosphere, which may adversely affect natural ecosystems and humankind.

3.2 The United Nations Framework Convention on Climate Change (FCCC), which became effective in March 1994, was an international acknowledgment that change in the Earth's climate and its adverse effects are a common concern of humankind and call for the widest possible cooperation by all countries. While recognizing that various actions to address climate change can be justified economically in their own right and help in solving other environmental problems, the Convention agreed on the need for all countries, especially developing countries, to have access to resources to achieve sustainable social and economic development. As developing countries progress toward sustainable development, and their energy consumption grows they will have to consider ways to achieve greater energy efficiency and control greenhouse gas emissions, including how to apply new technologies in ways that are economically and socially beneficial.[1]

3.3 The objective of the FCCC is the stabilization of greenhouse gas concentrations in the atmosphere at a level that will prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a timeframe sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened, and to enable economic development to proceed in a sustainable manner.[2] Global environmental benefits will be obtained to the extent that the objective of the FCCC is met.

3.4 The GEF operates as a mechanism for international cooperation to provide new and additional grant and concessional funding to meet the agreed incremental costs of projects to achieve agreed global environmental benefits in climate change (among other focal areas).[3] The GEF operational strategy for climate change sets out the way in which the GEF, consistent with the guidance of the FCCC, can assist eligible countries to contribute to meeting the FCCC's objective.

CONVENTION GUIDANCE

3.5 The GEF operational strategy in climate change incorporates the policy guidance of the FCCC. All GEF-funded activities in climate change will be in full conformity with the guidance provided by the FCCC and the Conference of the Parties (COP).

Convention context

3.6 The most recent guidance of the FCCC was provided by the first COP, which met in Berlin March 28-April 7, 1995. The COP provided initial guidance on eligibility criteria, program priorities, and policies for the financial mechanism, whose operation, on an interim basis, is entrusted to the GEF.[4] The GEF requested additional guidance from the COP on the development of an operational strategy.[5] In response to a specific request, the COP approved:

> "a mixed strategy wherein projects will be selected with a double set of programme priorities as described in paragraph 9(c) of the [GEF] report,[6] that is, if they met either one of the long-term programme priorities or one of the short-term programme priorities."[7]

This operational strategy for climate change sets out both the long-term and short-term operational programs and is fully consistent with the Convention guidance.

Non-Convention context

3.7 Whereas, the GEF may provide funds to any eligible country, only developing-country Parties are eligible to receive funding through the financial mechanism of the FCCC. When the GEF provides assistance outside the Convention's financial mechanism, it will ensure that such assistance is consistent with the COP's guidance.[8]

GEF-FINANCED ACTIVITIES

3.8 The overall strategic thrust of GEF-financed climate change activities is to support sustainable measures that minimize climate change damage by reducing the risk, or the adverse effects, of climate change.[9] The GEF will finance agreed and eligible enabling, adaptation, and mitigation activities in eligible recipient countries.

(a) *Enabling activities* facilitate implementation of effective response measures. The COP determined the program priorities of these GEF activities: "In the initial period, emphasis should be placed on enabling activities."[10] Some of these will be "agreed full cost" activities in support of country obligations under Article 12.1 of the United Nations Framework Convention on Climate Change (national communications);[11] others will be "agreed full incremental cost" activities for other relevant commitments.[12]

(b) *Adaptation activities* minimize the adverse effects of climate change. Initially, the GEF will meet the "agreed full costs of relevant adaptation activities undertaken in the context of the formulation of national communications."[13] These are the "Stage I adaptation activities" outlined by the COP.[14] Funding for adaptation activities beyond Stage I will be dependent on COP guidance. In the medium and long-term, subject to COP guidance, the GEF could finance agreed and eligible activities, including further

capacity building, undertaken to prepare for adaptation, as envisaged by Article 4.1(e), as well as measures to facilitate adequate adaptation, including insurance, and other adaptation measures as envisaged by Articles 4.1 (b) and 4.4.

(c) *Mitigation measures* reduce or lead to the reduction of greenhouse gas emissions from anthropogenic sources or protect or enhance removal of such gases by sinks (thus reducing the risk of climate change). The GEF will assist in implementation of national programs by supporting agreed mitigation activities[15] that meet either long-term or short-term criteria.[16]

3.9 The operational criteria for these GEF activities will be developed in accordance with this operational strategy and with GEF policies. The initial portfolio of GEF-financed activities will include:

(a) **Long-term measures**, including long-term mitigation projects and certain enabling activities. These will be country-driven and prepared in the context of GEF operational programs.

(b) **Enabling activities** in support of national communications, including Stage I adaptation activities. These will be country-driven and prepared and scheduled in accordance with GEF operational criteria.

(c) **Short-term mitigation projects**. These will be country-driven and approved individually on the basis of GEF operational criteria.

3.10 Because enabling activities are the foundation for much of the GEF portfolio, they will be emphasized initially. As the GEF builds on this foundation, the emphasis will gradually shift to the other types of activities. Long-term measures will constitute the largest share of the GEF climate change portfolio, with enabling activities in support of national communications a relatively small and declining share. Short-term mitigation projects will constitute only a small share of the portfolio, in order to maintain the operational emphasis on long-term measures.

3.11 Insofar as it is feasible, projects will be designed and located so as to meet global environmental objectives in other focal areas and to prevent or control land degradation.

Land Degradation

3.12 Degrading dryland soils and burning biomass are globally significant sources of greenhouse gas emissions. Prolonged or frequent drought and soil degradation undermine the soil's capacity to store carbon. Frequent and large-scale biomass burning reduces the carbon stored in vegetation and trees, increasing carbon emissions, and can contribute to land degradation. GEF activities in climate change will therefore take land degradation issues into account.[17] The following are illustrative of activities that accomplish this objective:

(a) Rural renewable energy projects (such as solar, wind, and biomass energy for lighting, water heating, cooking, and water pumping) and energy efficiency projects (such as those for increasing the efficiency of wood or charcoal burning stoves) that would help reduce unsustainable use of firewood.

(b) GEF biofuel activities that restore degraded land and biomass cover in order to produce, harvest, and utilize biomass in sustainable ways.

(c) Stage I adaptation activities that are eligible for GEF financing and that examine and plan for any additional soil protective measures that become necessary under climate change.

(d) Carbon sink protection, enhancement, and restoration projects that improve carbon storage in biomass and soils and help to prevent or control land degradation, especially desertification and deforestation.

LONG-TERM MEASURES

3.13 Working Group I of the Intergovernmental Panel on Climate Change has emphasized that it is the cumulation of emissions over time, rather than when emissions take place, that determines the impact of greenhouse gases on climate. Long-term mitigation measures respond to this concern.

3.14 GEF-financed long-term measures will be prepared in the context of operational programs. The operational programs in climate change designed to achieve long-term impacts build in part on the proposed approach outlined in the *Analytical Framework* of the Scientific and Technical Advisory Panel (STAP).[18] STAP recommended promoting the "backstop" technologies--technologies such as renewable energy technology that will in the long run be necessary to prevent greenhouse gas emissions--as a strategy to induce cost reductions. STAP noted that "What is relevant for the GEF ... is not only (a) [backstop technologies'] current cost, but (b) the prospects for reduction in costs of the technologies in question, and (c) the contribution that GEF can make to cost reductions."

3.15 In line with STAP's recommendations, operational programs will be developed to expand, facilitate, and aggregate the markets for the needed technologies and improve their management and utilization, resulting in accelerated adoption and diffusion. The emphasis of operational programs will be two-pronged: (a) removing barriers to implementation of climate-friendly, commercially viable technologies; and (b) reducing the cost of prospective technologies that are not yet commercially viable, to enhance their commercial viability.

(a) Removing implementation barriers for technologies

3.16 The GEF, in association with development banks and other development institutions, will contribute to the cultural, institutional, administrative, technical, policy-related, and financial learning processes necessary to remove barriers and promote broad dissemination of commercially available, climate-friendly technologies and measures throughout a country or region. Operationally, "removing

a barrier" must promote sustainability; it does not mean merely subsidizing a few projects so that they can surmount a barrier while leaving it in place. GEF activities will therefore mainly involve building endogenous capacity, improving public awareness, and demonstrating and disseminating technologies and measures. The costs of removing barriers, such as learning costs, are incremental costs.

3.17 Barriers may include price distortions, regulatory barriers and biases, lack of information, insufficient management capacity, inability to analyze non-traditional projects, higher perceived technology risk of the alternative technology, high transactions costs, high initial costs (inability to amortize, poor access to credit), and appropriation effects (investment benefits cannot be recovered by the agent that bears the costs).

(b) Reducing the costs of promising technologies

3.18 Inducing reductions in the manufacturing and implementation (transactions) cost of highly promising, climate-friendly technologies will help them become economically viable. GEF activities will help move the market for the technologies to the point where market size, prospective market development, and depth of distribution channels will reduce costs, hastening the day when projects using the technologies will become economically viable. In cases in which substantial cost reduction can be achieved through greater use of local manufacturing capacity, the GEF will pursue technology transfer, local procurement, and the development of appropriate industrial infrastructure. The GEF will finance part of the investment, associated preinvestment work, and technical assistance. The incremental cost is the difference in cost between the climate-friendly means of satisfying the country's sustainable development needs and the baseline means.

Operational programs

3.19 In both cases set out above, operational programs will identify measures and technologies that will be funded so as to achieve the objectives of the program. The operational programs will provide the context for the investments, capacity building, technical assistance, targeted research, public participation, and general enabling activities to be developed.

3.20 The GEF will make grants for incremental costs.[19] In the long run, the GEF could play an even larger catalytic role through other forms of financial assistance, particularly in relation to operational programs that accelerate implementation of commercial technologies and measures. The success of renewable rural electrification, for example, will be highly dependent on innovative financing. In the future the GEF might usefully embrace such other forms of financing as concessional and contingent lending, trusts and revolving funds, loan guarantees against specified mitigation-related risks, and temporary equity participation. It would of course be necessary for the GEF to show in some detail that such assistance is complementary to that from other channels, such as multilateral banks, and that it is indeed catalytic. However, until the Council approves revisions, modifications, or additional financing modalities, project support will be restricted to grants for incremental costs.[20]

3.21 Article 4.1 of the FCCC provides a list of commitments by all Parties, including those that need GEF support. The Article 4.1 commitments concern both anthropogenic emissions by sources

and removals by sinks, both mitigation and adaptation, all relevant economic sectors, all greenhouse gases not controlled by the Montreal Protocol, and various types of measure. Over time, additional operational programs that address issues not addressed by initial operational programs will be proposed to the GEF Council. These programs will be:

(a) Consistent with the guidance of the COP of the FCCC.

(b) The most promising technically, in accordance with the latest scientific and technical assessments of the Intergovernmental Panel on Climate Change (IPCC) and STAP.

(c) Cost-effective solutions to meet program objectives.

(d) Consistent with the GEF's other operational principles and strategic objectives.

3.22 Developing operational programs will be a dynamic process that emphasizes learning by doing. The lessons learned about effective response measures in recipient countries and by GEF Implementing Agencies will be absorbed, the programs modified, the insights generalized, and accepted good practice applied in new contexts. Future operational programs also will cover the measures that countries identify in their national communications, consistent with Article 4.1 of the FCCC. In the immediate short term, the constraints on programming will be the financial resources available for a given replenishment period and the capacities of the GEF, its Implementing Agencies, and the recipient countries to develop and implement projects.

3.23 Three initial operational programs are proposed on the basis of a review of technical assessments, including recent work for the GEF on the cost reductions expected in new energy technologies.[21] These programs are consistent with the guidance provided by the COP and with the most recent findings of the IPCC. The three operational programs that will be developed initially are:[22]

(a) Removing barriers to energy conservation and energy efficiency.

(b) Promoting the adoption of renewable energy by removing barriers and reducing implementation costs.

(c) Reducing the long-term costs of low greenhouse gas-emitting energy technologies.

Removing barriers to energy conservation and energy efficiency

3.24 The purposes of this operational program are:

(a) To remove barriers to the large-scale application, implementation, and dissemination of least economic cost, commercially established, or newly developed, energy-efficient technologies; and to promote more efficient energy use where a reduction in greenhouse gas emissions would result. Such measures could include enhancing demand-side management, particularly in the basic materials industries, transport, and housing; establishing and strengthening integrated resource planning and administration capabilities; and encouraging supportive legal, regulatory, and policy changes.

(b) To help ensure the sustainability of the resulting "win-win"[23] projects by demonstrating cost recovery and facilitating mainstream financial support, including from the multilateral development banks.

(c) To facilitate the learning process required for widespread application of energy conservation and energy efficiency projects in developing countries.

3.25 Within this operational program, the barriers in specific markets will be identified and the measures for their removal will be proposed. The programmatic benefits will be the implementation of "win-win" projects following the removal of the barriers. (For example, the GEF could facilitate the establishment and strengthening of energy service institutions able to undertake both demand-side and supply-side measures.) The incremental costs are the costs of removing the barriers to energy-efficient technologies. Measures aimed at removing the barriers to implementation will include assessment and analysis, information dissemination and awareness building, institutional reform and strengthening, policy adjustments, planning, and legislative and regulatory measures. In particular, it will be necessary to:

(a) Assess the economic scope for energy conservation and energy-efficient technologies and programs whose implementation is blocked by barriers.

(b) Estimate the contribution that such projects would make to reducing greenhouse gases.

(c) Identify all barriers, particularly energy pricing distortions.

(d) Propose specific measures to remove barriers.

(e) Estimate the costs of barrier removal.

(f) Demonstrate the sustainability of the "win-win" projects after GEF support has ended, including demonstrations of appropriate cost recovery.

(g) Estimate the financial requirements and time horizon.

(h) Determine how programmatic benefits will be monitored and evaluated.

Promoting the adoption of renewable energy by removing barriers and reducing implementation costs

3.26 The purposes of this operational program are to:

(a) Remove barriers to the use of commercial or near-commercial renewable energy technologies.

(b) Reduce high implementation costs of renewable energy technologies due to low-volume or dispersed application.

Examples of such renewable energy technologies are photovoltaics (in both on-grid and off-grid applications); combustion of agricultural residues to generate heat and power, including steam boilers using biomass residues; other technologies for using biofuels; methane-control technologies for waste disposal; and wind power. Supporting measures include organizational reform and innovative financing.

3.27 Within this operational program, it will be necessary to:

(a) Assess the economic scope in specified regions for "win-win" renewable energy projects on the basis of renewable energy resource data (for example, for wind, solar, biomass, and micro-hydro) and cost data for the renewable energy technologies and the alternatives.

(b) Estimate the extent to which barriers or high implementation costs hamper cost-effective implementation.

(c) Estimate the contribution that fulfilling the full scope of such projects would make to mitigating greenhouse gases.

(d) Demonstrate appropriate cost recovery and hence the sustainability of similar renewable energy projects after GEF support for removing barriers and reducing implementation costs has ended.

(e) Estimate the financial requirements and time horizon.

(f) Determine how the programmatic benefits will be monitored and evaluated.

3.28 It will be necessary to identify all barriers to the use of renewable energy -- including any energy pricing distortions; to propose specific measures to remove the barriers; and to estimate the costs of barrier removal. In addition to removing barriers, it may also be necessary to reduce implementation costs through selected demonstration of the technologies and of cost recovery principles. GEF grants also may be needed to meet the incremental cost of purchased units in order to stimulate demand and thereby achieve economies of scale. Demand must be high enough for local dealer support and marketing infrastructure to expand to the point where unit implementation costs are reduced.

Reducing the long-term costs of low greenhouse gas-emitting energy technologies

3.29 This operational program is designed to reduce the cost of prospective technologies that have not yet become widespread least-cost alternatives. The target is the technology, not any particular market for its application. Its purpose is to promote the application of specified technologies so that, through learning and economies of scale, the costs of manufacture will tend to be commercially competitive. It will therefore be necessary to specify technologies whose costs will drop greatly with economies of scale in application. Proven but less mature technologies, such as solar-thermal power generation for high insolation regions, grid-connected and household-related solar applications, advanced biomass power and fuel technologies, fuel cells, and advanced fossil fuel technologies my be particularly well suited to this approach. The emphasis will be on renewable energy, and support for applications of fossil fuel technologies will be relatively modest. A first step will be to review the proposed technologies, taking into account STAP's advice, to ensure that the essential research and development to make the technologies technically sound has been completed.

3.30 The benefits of the program will be the reductions in the costs of applying promising technologies. The GEF will finance the incremental costs of projects that advance application of specified technologies. For each technology, it will be necessary to:

(a) Justify the choice of the technology as a potential mitigation measure based on scientific and technical considerations, the resource base in recipient countries, and prospects for sustainability and replicability.

(b) Set out the cost reduction objective.

(c) Estimate the level of funding required to achieve the programmatic objectives and identify the necessary capacity building, targeted research, and investment needs.

(d) Assess the programmatic impact of GEF.

(e) Estimate the financial requirements and time horizon of the activities.

(f) Show how the programmatic benefits will be monitored and evaluated.

3.31 Within this operational program, initial activities will be developed for the following technologies:

(a) **Solar-thermal power generation.** Solar-thermal electric technology, when fully mature, will be part of a sustainable long-term energy supply infrastructure of developing countries, especially in conditions of strong direct insolation. Since it is currently not the least-cost alternative for power supply, countries will incur an incremental cost in adopting it now. GEF financing of these incremental costs will be complementary to the normal sources of financing required for power development in recipient countries. However, it is expected that pilot GEF support for this technology will accelerate learning and lower the incremental costs for future applications, making the technology more competitive with fossil fuel power generation.

(b) **Advanced biomass power and fuel systems.** The advanced power and fuel systems that use biomass (including agricultural waste) are highly promising: IPCC sees an enormous potential and role for biomass power and liquid fuels. This technology includes both large-scale systems -- such as the GEF Pilot Phase project in Brazil for the use of biomass in aeroderivative turbines -- and smaller rural and cogeneration uses.

(c) **Fuel cells.** Fuel cells offer unique advantages when deployed for high-efficiency distributed generation and cogeneration. In the longer term, fuel cells may be able to replace liquid fossil fuels in fast-growing markets in recipient countries (for example, transportation).

(d) **Advanced fossil fuel technology.** Advanced fossil fuel technologies (such as clean coal technologies) may help to provide energy services with lower g[illegible] emissions than those for coal. GEF support f[illegible] will play a catalytic role by demonstrating their viability in order to encourage wider adoption.

3.32 Although applications for this operational program will be sought primarily in countries where the technology will directly replace fossil fuels, no country will be excluded from the program's scope since the technology is the focus of attention, rather than the market or region. The lowest-cost applications, wherever they are, then will help build a market for the technology. The long-term objective is to identify an economically viable technology that will become a "win-win" option for many other countries as well.

ENABLING ACTIVITIES IN SUPPORT OF NATIONAL COMMUNICATIONS

3.33 Enabling activities provide the foundation to address climate change through country-driven activities. They have been defined by the FCCC as "planning and endogenous capacity-building, including institutional strengthening, training, research and education, that will facilitate implementation, in accordance with the Convention, of effective response measures."

Support for the preparation of national communications

3.34 Enabling activities that are specifically related to countries' obligations concerning national communications under Article 12.1 of the FCCC are eligible for GEF financing on the basis of "agreed full costs."[24] Such enabling activities will result in plans on which the national communications will be based. These plans will serve as the basis for sustainable and effective response measures. The assistance provided under these enabling activities will conform fully to the guidance of the COP with respect to national communications. Because the format for national communications is still under consideration, the content will, for the interim, be based on the provisions of Article 12.1. The GEF has prepared operational criteria to guide the preparation and scheduling of support for these activities and to ensure:

(a) Coverage without duplication of the efforts of others (including bilaterally financed studies).

(b) Appropriate sequencing of the activities.

(c) The use of best practice.

(d) Cost-effectiveness (including use of norms).

Stage I adaptation activities

3.35 GEF will provide full-cost funding for Stage I adaptation activities undertaken within the context of the formulation of national communications.[25] Such activities may include studies of the possible impacts of climate change; identification of options for implementing the adaptation provisions, especially the obligations set forth in Articles 4.1(b) and 4.1(e); and relevant capacity building. Stage I adaptation activities supported by the GEF will assist the COP to identify countries and regions that are particularly vulnerable to climate change. Funding for subsequent activities will depend on future COP guidance.

Other enabling activities

3.36 The GEF will provide financing for other enabling activities on an "agreed full incremental cost" basis. As with other country-driven initiatives, these activities will be prepared in the context of an operational program to ensure sustainability, continuity, and integration of the enabling activity with follow-up investments, capacity building, technical assistance, targeted research, and public participation.

SHORT-TERM PROJECTS

3.37 The GEF may finance climate change projects that reduce greenhouse gases in the short term, even if they are not part of an operational program. Such projects will be funded if they are country

priorities, cost-effective in the short term, and likely to succeed. The rationale for project support is primarily the expected reduction in greenhouse gases rather than its programmatic impact. Careful monitoring will be required to verify that the actual reduction in greenhouse gas emissions meets or exceeds the original expectation.

3.38 Short-term projects may be of various types, including initiatives to seize unforeseen opportunities and to meet contingencies. Projects of the following types may satisfy the short-term criteria below:

(a) Carbon sink protection.

(b) Enhancement and restoration measures that improve carbon storage in biomass and soils--many of which will thereby contribute to preventing and controlling land degradation.

(c) Standard fossil fuel projects that result in lower emissions, such as fuel switching from coal to natural gas.

(d) Standard energy efficiency projects, such as boiler improvements.

Projects that require conducive policies in order to be economic and sustainable will be eligible for GEF financing when such policies are in place.

Criteria for short-term projects

3.39 In line with the criteria for short-term response measures (see chapter 1), the following considerations will be taken into account:

(a) Cost-effectiveness

Cost-effective projects are those that mitigate a specified amount of greenhouse gas emissions for a given cost. These can be identified as projects with a unit abatement cost (UAC), the cost per unit of greenhouse gas emissions abated or sequestered [expressed as dollars per ton of carbon-equivalent ($/tC)]. The criterion is therefore a specified UAC, which will act as a reference value.

One basis for estimating a reasonable UAC reference value for GEF-financed short-term projects is the climate change damage avoided through the project. The IPCC is currently assessing damage cost estimates, and their recommended estimate will be used when available. At present, lower-bound estimates in the available literature under consideration by the IPCC vary between $5.30 and $10.00 per tC.[26] A conservative approach is to set a UAC ceiling of $10 per tC, ensuring that GEF-financed short-term climate mitigation activities are limited to projects that are cost-effective even under conservative, technically reasonable assumptions about the damage due to future climate change or additional benefits.[27] Pure abatement projects (such as those involving low-cost fuel switching, for example, the use of

Liquefied Petroleum Gas (LPG) as a transport fuel) will be expected to be very cost-effective, that is, to have UACs closer to zero than the ceiling. Projects with more than just abatement benefits -- such as "proof-of-concept" projects or others that also produce valuable lessons in implementation or monitoring, such as a carbon sequestration project -- could be justified even with higher UACs.

(b) *Likelihood of success*

Where a project funding is seen to be justified primarily in terms of the expected carbon abatement resulting from the project itself, it must have a high probability of success. This is a qualitative criterion, but supporting assessments of technical and institutional risk will be needed.

(c) *Country Driven*

Proposed short-term projects must be country driven and have the country's highest priority for funding. This may be demonstrated:

1. By inclusion of the project in the country's climate change plan.
2. Identification through an enabling activity.
3. Support of country-driven policy measures to mitigate greenhouse gases.

Initial guidance on policies, programme priorities and eligibility criteria to the operating entity or entities of the financial mechanism[1]

The Conference of the Parties

Recalling Article 11.1 of the United Nations Framework Convention on Climate Change,

Having considered recommendation 11 of the Intergovernmental Negotiating Committee for a Framework Convention on Climate Change,

1. *Decides* to adopt the following initial guidance on polices, programme priorities and eligibility criteria to the operating entity or entities of the financial mechanism:

(a) Regarding activities undertaken under Article 11 of the Convention,

Within the framework of the financial mechanism:

(i) The operating entity or entities should, in all funding decisions related to the financial mechanism, take into account Article 4.1, 4.6, 4.8, 4.9 and 4.10 of the Convention . In particular, in order to take full account of the specific needs and s special situations of the least developed countries, funds allocated to their project/programmes should be on a grant basis;

(ii) Projects funded through the financial mechanism should be country-driven and in conformity with, and supportive of, the national development priorities of each country;

(iii) The operating entity or entities should ensure that, with reference to activities involving transfer of technology, such technology is environmentally sound and adapted to suit local conditions;

(iv) As far as possible, due consideration should be given to the following aspects concerning activities undertaken under the financial mechanism. Activities should be:

- supportive of the national development priorities which contribute to a comprehensive national response to climate change;

[1] FCCC/CP/1995/7/Add.1, decision 11/CP.1

- consistent with and supportive of the relevant provisions of internationally agreed programmes of action for sustainable development in line with the Rio Declaration and Agenda 21 and UNCED-related agreements;

- sustainable and lead to wider application;

- cost effective;

(v) The operating entity or entities of the financial mechanism should strive to leverage other funds in support of the activities of developing country Parties to address climate change;

(vi) In mobilizing funds, the operating entity or entities should provide all relevant information to developed country Parties and other Parties included in Annex II to the Convention, to assist them to take into full account the need for adequacy and predictability in the flow of funds. The entity or entities entrusted with the operation of the financial mechanism should take full account of the arrangements agreed with the Conference of the Parties, which, inter alia, shall include determination in a predictable manner of the amount of funding necessary and available for the implementation of the Convention, as provided for in Article 11.3(d) of the Convention.

(b) Regarding programme priorities,

(i) Priority should be given to the funding of agreed full costs (or agreed full incremental costs, as appropriate) incurred by developing country Parties in complying with their obligations under Article 12.1 and other relevant commitments under the Convention. In the initial period, emphasis should be placed on enabling activities undertaken by developing country Parties, such as planning and endogenous capacity-building, including institutional strengthening, training, research and education, that will facilitate implementation, in accordance with the Convention, of effective response measures;

(ii) In this context, activities aimed at strengthening research and technological capabilities for the implementation of the Convention in developing country Parties should be supported through international and intergovernmental efforts. Such support would include networking and the training of experts and, as appropriate, institutional development;

(iii) Emphasis should also be placed on improving national public awareness and education on climate change and response measures;

(iv) The operating entity or entities should finance the formulation by developing country Parties of nationally determined programmes to address climate change issues which are in accordance with national development priorities. To facilitate

the formulation of these programmes, it should finance capacity-building and all other activities related to the formulation, management and regular updating of these programmes, which should, as far as possible, be comprehensive;

(v) The operating entity or entities should, in accordance with the policies, programme priorities and eligibility criteria as established by the Conference of the Parties, be available to assist, if so requested, in the implementation of the national programmes adopted by developing country Parties;

(vi) In the implementation of these national programmes, the operating entity or entities should support agreed activities to mitigate climate change, as referred to in the Convention, in particular in Article 4.1, consistent with Article 4.3.

(c) Regarding eligibility criteria,

Eligibility criteria shall apply to countries and to activities and shall be applied in accordance with Article 11.1, 11.2 and 11.3;

(i) Regarding eligibility of countries, only countries that are Parties to the Convention would be eligible to receive funding upon entry into force of the Convention. In this context, only developing country Parties would be eligible to receive funding through the financial mechanism, in accordance with Article 4.3;

(ii) Regarding eligibility of activities,

- Those activities related to obligations under Article 12.1 to communicate information for which the "agreed full costs" are to be met are eligible for funding;

- Measures covered by Article 4.1 are eligible for funding through the financial mechanism in accordance with Article 4.3. Such measures should be agreed between the developing country Party and the international entity or entities referred to in Article 11.1, in accordance with Article 4.3;

- In addition to the above, such measures would be eligible for financial support under Article 11.5.

(d) Regarding adaptation, the following policies, programme priorities and eligibility criteria should apply:

(i) Adaptation to the adverse effects of climate change, as defined by the Convention, will require short, medium and long term strategies which should be cost effective, take into account important socio-economic implications, and should be implemented on a stage-by-stage basis in developing countries that are Parties to the Convention. In the short term, the following stage is envisaged:

- Stage I: Planning, which includes studies of possible impacts of climate change, to identify particularly vulnerable counties or regions and policy options for adaptation and appropriate capacity-building;

(ii) In the medium and long term, the following stages are envisaged for the particularly vulnerable countries or regions identified in Stage I:

- Stage II: Measures, including further capacity-building, which may be taken to prepare for adaptation, as envisaged by Article 4.1(e);

- Stage III: Measures to facilitate adequate adaptation, including insurance, and other adaptation measures as envisaged by Article 4.1(b) and 4.4;

(iii) Based on the outputs of the Stage I studies, as well as other relevant scientific and technical studies, such as those of the Intergovernmental Panel on Climate Change (IPCC), and any emerging evidence of the adverse effects of climate change, the Conference of the Parties may decide that it has become necessary to implement the measures and activities envisaged in Stages II and III, consistent with the relevant conclusions of the Committee and with the provisions of the Convention;

(iv) Funding for the implementation of such adaptation measures and activities would be provided as follows:

- For Stage I, the Conference of the Parties at its first session, shall entrust to the Global Environment Facility (GEF) the interim operating entity of the financial mechanism, the task of meeting the agreed full costs of the activities required by Article 12.1 of the Convention. This would include meeting the agreed full costs of relevant adaptation activities undertaken in the context of the formulation of national communications; such activities may include studies of the possible impacts of climate change, identification of options for implementing the adaptation provisions (especially the obligations contained in Article 4.1(b) and 4.1(e) of the Convention), and relevant capacity building;

- If it is decided in accordance with paragraph (iii) above, that it has become necessary to implement the measures envisaged in Stages II and III, the Parties included in Annex II to the Convention will provide funding to implement the adaptation measures envisaged in these stages in accordance with their commitments contained in Article 4.3 and 4.4 of the Convention;

- In its review of the financial mechanism of the Convention under Article 11.4, the Conference of Parties, taking into account studies conducted and options for adaptation identified during Stage I, any emerging evidence of the adverse effects of climate change, as well as the relevant conclusions

reached by the Committee and its own decisions on this issue, must decide on the channel or channels, under Article 11 of the Convention, to be used for the funding referred to in the preceding subparagraph, to implement the adaptation measures envisaged in Stages II and III.

(e) Regarding agreed full incremental costs,

The various issues of incremental costs are complex and difficult and further discussion on the subject is therefore needed. The application of the concept of agreed full incremental costs should be flexible, pragmatic and on a case-by-case basis. Guidelines in this regard will be developed by the Conference of the Parties at a later stage on the basis of experience.

2. Also decides to take a note of the following conclusions of the Intergovernmental Negotiating Committee for a Framework Convention on Climate Change:

(a) Outside the framework of the financial mechanism,

Consistency should be sought and maintained between activities (including those related to funding) relevant to climate change undertaken outside the framework of the financial mechanism and the policies, programme priorities and eligibility criteria for activities as relevant, established by the Conference of the Parties. Towards this end and in the context of Article 11.5 of the Convention, the secretariat should collect information from multilateral and regional financial institutions on activities undertaken in implementation of Article 4.1 and Article 12 of the Convention; this should not introduce new forms of conditionalities.

(b) On transfer of technology, the Committee took note of document A/AC.237/88 prepared by the interim secretariat. The Committee recognized the importance of this subject under the relevant articles of the Convention and concluded that discussions should continue at the Conference of the Parties and its subsidiary bodies with a view to identifying ways and means of operationalizing the transfer of technology under Article 4.5 of the Convention.

(c) The Committee took note of document A/AC.237.Misc.40, an approach paper by the Group of 77 and China on the format of communication of information by Parties not included in Annex I to the Convention.

Report of the Global Environment Facility to the Conference of the Parties on the development of an operational strategy and on initial activities in the field of climate change[2]

The Conference of the Parties,

Recalling Article 11.1 of the United Nations Framework Convention on Climate Change,

Having considered the report by the Global Environment Facility (GEF) containing information on the development of an operational strategy in the climate change area and on the initial activities in this field (FCCC/CP/1995/4),

1. *Welcomes* the decision of the GEF Council to follow a "two-track" programming approach in 1995: while work is undertaken by the GEF secretariat to develop a long-term comprehensive operational strategy, supported by analytical work and consultations, and allowing for the guidance from the Conference of the Parties (track one), some project activities are to be undertaken to allow a smooth transition between the operations of the pilot phase and the restructured GEF (track two);

2. *Decides* to adopt a mixed strategy wherein projects will be selected with a double set of programme priorities as described in paragraph 9(c) of the report, that is, if they met either one of the long-term programme priorities or one of the short-term programme priorities;

3. *Takes note* of the report on initial activities;

4. *Invites* the GEF in future reports to take fully into account relevant aspects of the modalities for the functioning of operational linkages between the Conference on the Parties and the operating entity or entities of the financial mechanism.

[2] FCCC/CP/1995/7/Add.1, decision 12/CP.1

NOTES

1. See the *United Nations Framework Convention on Climate Change* (FCCC), especially the Preamble.

2. FCCC, Article 2.

3. Global Environment Facility, *Instrument for the Establishment of the Restructured Global Environment Facility*, 1994, Washington, D.C., para 2(a).

4. *United Nations Framework Convention on Climate Change*. FCCC/CP/1995/7/Add.1, decision 11/CP.1, June 6, 1995. Hereafter referred to as "Guidance". This decision appears in annex 3.1.

5. Global Environment Facility, "Report by the GEF to the First Conference of the Parties of the Framework Convention on Climate Change", GEF/C.3/10, Washington, D.C., February 1995.

6. "Report by the GEF to the First Conference of the Parties."

7. *United Nations Framework Convention on Climate Change*. FCCC/CP/1995/7/Add.1; decision 12/CP.1, June 6, 1995. This decision appears in annex 3.2.

8. Guidance, 2 (a).

9. Terminology used in this paragraph has the same meaning as the COP Guidance and the FCCC (in particular, Articles 1, 4, and 12).

10. Guidance, 1(b) (i).

11. Guidance, 1(b) (i), and FCCC, Article 4.3.

12. Guidance, 1(b) (i), and FCCC, Articles 4.1 and 4.3.

13. Guidance, 1(d).

14. Guidance, 1(d).

15. Guidance, 1(b) (vi). See also FCCC, Articles 4.1 and 4.3.

16. *United Nations Framework Convention on Climate Change*. FCCC/CP/1995/7/Add.1, decision 12/CP.1, June 6, 1995.

17. Global Environment Facility, "Scope and Preliminary Operational Strategy for Land Degradation", GEF/C.3/8.

18. Scientific and Technical Advisory Panel, "Analytical Frameworks," 1993, p.31.

19. Global Environment Facility, "Incremental Costs and Financing Modalities," section I, GEF/C.2/6 Rev.2.

20. A revised paper on financing modalities is scheduled for Council consideration in April 1996.

21. Kulsum Ahmed "Renewable Energy Technologies: A Review of their Status and Costs of Selected Technologies." World Bank Technical Paper 240: Energy Series. World Bank, Washington, D.C., 1994.

22. In the initial phase, these operational programs will not include activities or projects for carbon sinks, transport energy, or geothermal energy. Carbon sequestration will be a factor, however, in short-term response measures and in certain programs in the biodiversity and international waters focal areas that also addressed issues in land degradation or the preservation of forest habitats, and in such cases special attention will be given to effective baseline definitions and monitoring. Transport will be fundamental to addressing climate change, and a proposal to develop an operational program in this area will be prepared for Council consideration at a later time when the role and effectiveness of the GEF in this area are more clearly defined. Geothermal heat, as a commercially available technology, may be one among the broad range of technologies that will be stimulated in the program on renewable energy which addresses barriers to these technologies, but will not be identified as a technology for support under the program on greenhouse gas-emitting energy technologies.

23. "Win-win" projects are those that are least economic cost and would normally be chosen solely on the basis of national interest. In addition, these projects also result in global environmental benefits. The choice of energy efficient lighting is an example of a "win-win" activity.

24. Global Environment Facility, *Instrument for the Establishment of the Restructured Global Environment Facility*, Washington, D.C., 1994, para 6; FCCC, Article 4.3; and Guidance, 1(b)(i).

25. Guidance, 1(d).

26. W.D. Nordhaus, *Managing the Global Commons: The Economics of Climate Change* (Cambridge, Mass.: MIT Press, 1994); W.R. Cline *"Optimal Carbon Emissions over Time: Experiments with the Nordhaus DICE Model"*, Institute for International Economics, Washington, D.C. 1992; W. R. Cline, "Modelling Economically Efficient Abatement of Greenhouse Gases", Paper presented at the United Nations Conference on Global Environment, Energy and Economic Development, Tokyo, September 1993; S.C. Peck, and T. J. Teisberg, "CETA: A Model for Carbon Emissions Trajectory Assessment", *Energy Journal* 13, 1992: 55-77; D. Maddison, "The Shadow Price of Greenhouse Gases and Aerosols", Centre for Social and Economic Research on the Global Environment, University College London and University of East Anglia, Norwich, 1993. For a recent literature review, see S. Fankhauser, *Valuing Climate Change, (*London: Earthscan, 1995).

27. Note that short-term measures can only postpone carbon accumulation because countries will still be emitting greenhouse gases. At the suggested ceiling, every $200 million spent on short-term projects would delay atmospheric carbon accumulation by about one day.

CHAPTER FOUR

INTERNATIONAL WATERS

4.1 The world's water resources are under enormous stress, and the ecosystems, people, and economic development that depend on these resources are facing an unsustainable future. Global environmental concerns relating to international waters include:

(a) Degradation of the *transboundary water resources,* caused mainly by pollution from land-based activities (toxic chemicals, nutrients, pathogens, oxygen-demanding wastes, sediment, and debris).

(b) *Physical habitat degradation* of coastal and near-shore marine areas, lakes, and watercourses (for example, wetlands, mangroves , estuaries, coral reefs), as a result of inappropriate management (for example, land conversion, dredging, coastal construction, irrigation).

(c) *Introduction of nonindigenous species* that disrupt aquatic ecosystems and cause toxic and human health effects (untreated ballast water discharges from ships, for example).

(d) *Excessive exploitation of living and nonliving resources* due to inadequate management and control measures (for example, overfishing, excessive water withdrawal).

4.2 Degradation in both freshwater and marine systems and in surface waters as well as groundwater resources is causing irreversible environmental effects, hardship for the poor, real losses to the economy, human health concerns, and the need for costly investments to mitigate the damage. Marine and freshwater systems constitute important sources of income and food for a large part of the world's population whose food and water supplies are now at risk. For example, globalization of technological advances in the fishing industry, pollution, and habitat destruction have depleted fish stocks to dangerously low levels and placed food security in jeopardy in many areas. Downstream or transboundary international issues of global significance have yet to be effectively addressed.

4.3 The degradation occurring in international waters represents a warning that the carrying capacity of transboundary freshwater basins, coastal areas, and marine ecosystems has been approached in some places and exceeded in others by inappropriate sectoral development policies and projects as well as unwise use of the water resources. A consensus has emerged that a more comprehensive approach to water resources management is needed -- one that is cross-sectoral, integrates ecological and development needs, and is based on holistic analyses of the carrying capacity of the water environment.[1] In this approach, the river basin, groundwater system, coastal area, or large marine ecosystem typically serves as a management unit on which to base changes in the way that sectoral development activities are carried out and where priority environmental

interventions are made. In many instances, action programs are needed to restore proper functioning of ecosystems or remedy major human health risks. Such a comprehensive approach that integrates actions across sectors is new to most countries, difficult to implement, and even harder to achieve when actions must be coordinated among countries.

4.4 The GEF's objective in the international waters focal area is to contribute primarily as a catalyst to the implementation of a more comprehensive, ecosystem-based approach in managing international waters and their drainage basins as a means to achieve global environmental benefits. The GEF will act as a catalyst to ensure that countries better understand the functioning of their international waters systems, gain an appreciation of how their sectoral activities influence the water environment, and find means for collaborating with neighboring countries to collectively pursue effective solutions. As such, the GEF will primarily fund the transactions costs of these learning processes so that countries may make changes in the ways that human activities are carried out in different sectors and make priority environmental interventions so that the capacity of any particular waterbody to sustainably support human activities is not exceeded.

4.5 The term "international waters" as used by the GEF includes the oceans, large marine ecosystems, enclosed or semi-enclosed seas and estuaries as well as rivers, lakes, groundwater systems, and wetlands with transboundary drainage basins or common borders. The water-related ecosystems associated with these waters are considered integral parts of the systems. The common global hydrologic cycle dynamically links many watersheds, airsheds, estuaries, and coastal and marine waters through transboundary movement of water, pollutants, and living resources.

4.6 The international waters area includes numerous international conventions, treaties, and agreements. The architecture of marine agreements is especially complex,[2] and a large number of bilateral and multilateral agreements exist for transboundary freshwater basins.[3] Related conventions and agreements in other areas increase the complexity.[4] Chapters 17 and 18 of *Agenda 21*[5] broadly capture the spirit of these international agreements and offer particularly valuable guidance to countries. GEF activities undertaken in this focal area will be consistent with *Agenda 21*.

SCOPE AND GEF ROLE

4.7 The overall strategic thrust of GEF-funded international waters activities is to meet the agreed incremental costs of: (a) assisting groups of countries to better understand the environmental concerns of their international waters and work collaboratively to address them; (b) building the capacity of existing institutions (or, if appropriate, developing the capacity through new institutional arrangements) to utilize a more comprehensive approach for addressing transboundary water-related environmental concerns; and (c) implementing measures that address the priority transboundary environmental concerns. The goal is to assist countries to utilize the full range of technical, economic, financial, regulatory, and institutional measures needed to operationalize sustainable development strategies for international waters.

4.8 The GEF will play a catalytic role in assisting countries seeking to leverage cofinancing in association with national funding, development financing, agency funding, and private sector action for different elements of a comprehensive approach for sustainably managing international waters. The "precautionary principle," the "polluter pays principle," and policy reforms are most always

included as integral elements of international waters projects and programs to foster incentives to use resource-efficient and clean production methods that will help reduce discharges of toxic substances and sustain global environmental benefits. Both business communities and governments have important roles in developing and implementing pollution prevention programs aimed at reducing or eliminating waste generation. The GEF can assist countries in finding ways to harmonize and overcome technical and financial barriers to waste reduction and build the necessary capacity, including human resources development, to facilitate implementation.

4.9 The use of sound science and proven technological innovations can help recipient countries address the imminent threats to international waters. In particular, simulation models and information technology can provide a basis for improving management decisions on complex environmental problems and often provide an opportunity for involving countries' scientific communities in projects. Stakeholder involvement and participation of different sectors in each recipient country also constitute important elements of GEF activities concerning international waters.[6] Through such stakeholder involvement, needed changes in sectoral activities can be made to reduce the stress on international waters. In addition, use of computer-based information systems and computer networking among stakeholders and government organizations can foster broad-based involvement in planning and implementing GEF international waters projects and should help to improve the quality, public awareness, and scientific basis of international waters projects. These technological innovations promote transparency among cooperating nations regarding key information, encourage broader participation by stakeholder groups within country and across countries, and provide a basis for evaluation.

4.10 Given the broad scope of activities in this focal area and the widespread nature of threats to international waters, the GEF's activities will focus mainly on seriously threatened waterbodies and the most imminent threats to their ecosystems. Consequently, the GEF will place priority on the following activities to address imminent threats to international waters:

(a) Control of land-based sources of surface and groundwater pollution that degrade the quality of international waters. Of special emphasis is the prevention of releases of persistent toxic substances and heavy metals that cannot be neutralized by marine and freshwater ecosystems or that accumulate in living organisms. High priority is also placed on abatement of common contaminants such as nutrients, biological contaminants, or sediments that endanger species or threaten ecosystems.

(b) Prevention and control of land degradation where transboundary environmental concerns result from desertification or deforestation.

(c) Prevention of physical or ecological degradation, and hydrologic modification, of critical habitats (such as wetlands, shallow waters, and reefs) that sustain biodiversity, provide shelter and nursery areas for the production of fish protein sources, and otherwise are important for restoring and maintaining ecosystems associated with international waters.

(d) Control of unsustainable exploitation of living and nonliving resources resulting from inadequate management measures such as overfishing and excessive withdrawal of freshwater.

(e) Control of ship-based sources of chemical washings and nonindigenous species that can disrupt ecosystems or cause toxic and human health effects.[7]

Taking into account lessons learned from pilot phase projects in this focal area, priority will be given to comprehensive approaches to management that emphasize imminent environmental threats and different geographic settings. These broad-based approaches are regarded as a more effective response than narrow, sector-specific interventions such as traditional ship-waste proposals.

BIOLOGICAL DIVERSITY AND CLIMATE CHANGE

4.11 Wherever appropriate, activities in the international waters focal area will be coordinated with those in other GEF focal areas. GEF projects integrating several focal areas have the potential to multiply global benefits from GEF interventions. For example, wetland restoration and protection initiatives can provide benefits for both biodiversity protection and water quality improvement. Biodiversity protection and carbon sequestration have potential linkages and important roles in restoring damaged transboundary basins. Other, more subtle linkages exist; for example, support for energy conservation and efficiency may help reduce the burning of fossil fuels that emit mercury as a by-product. Long-range transport of the mercury contaminates international waters and the biota consumed by humans. Synergies with biodiversity are particularly strong in coastal and marine areas as well as in projects addressing small island developing states and will be reflected in programmatic initiatives, as noted in paragraph 4.19. Adoption of integrated coastal area management strategies, a common feature in this focal area, can provide benefits for biodiversity protection as well as for the climate change focal area.

LAND DEGRADATION

4.12 There are strong and complex linkages among land use policies and practices, land degradation, and the impairment of water-related ecosystems. Land degradation is linked to sediment pollution and salt intrusion in rivers, lakes, and aquifers; vegetation loss; overpumping of ground water; and salination of soil. Heavy sediment loads damage aquatic and marine biodiversity, make rivers more prone to flooding, and result in damage to cropland and therefore lowered food production. Dryland river, lake, and groundwater basins, which are often transboundary in nature, are critical to the well-being of some one billion people who live in areas at risk from desertification.

4.13 Improved water management in dryland transboundary basins is fundamental to enhanced food security, reduction of risks of drought or flood, and better environmental management. In dryland regions, improved management of groundwater supplies is essential to support sustainable development. Some groundwater systems may be dynamically linked to surface waters through indirect recharge processes, while others contain "older" fossil water that must be carefully managed if future generations are to use them. Sustainable development cannot proceed in these transboundary basins without a cooperative, multicountry water resources management strategy that integrates land and water use decisions, determines the environmental capability of the basin to

sustainably support different sectoral water uses, places priority on protection of unique aquatic environments and flows needed to sustain them, explores options for reducing water use to sustainable levels, and contains provision for emergency planning to address variable flows. Recent technological developments in satellite technology and remote sensing should help to ensure access to necessary hydrologic information for preparing needed strategies. Improved watershed and catchment management, sustainable land-use/soil conservation systems, reforestation, and vegetative rehabilitation, accompanied by changes in sectoral, social, and economic policies, can help address transboundary water-related environmental concerns.

4.14 The comprehensive approach utilized in this focal area encourages integrated land and water management activities that assist countries in making the transition to sustainable development. Activities to prevent land degradation and rehabilitate degraded catchment areas will be included as part of an international waters project if they contribute to the resolution of priority transboundary water-related environmental problems. The emphasis will be on (a) facilitating regional and international cooperation, (b) pilot initiatives with demonstration value, (c) a comprehensive approach that integrates the management of land and surface/groundwater systems, and (d) coordinated land use planning and management, relying on technology-based information systems, information networking, stakeholder involvement, extension services, regulatory frameworks, and incentive systems.

OPERATIONAL PROGRAMS

4.15 The GEF will utilize a programmatic approach in targeting its resources to address the imminent threats outlined in paragraph 4.10. These operational programs will help capture additional programmatic global benefits in a cost-effective manner by linking country-driven needs with the comparative advantage of different Implementing Agencies. Operational programs will be developed to achieve the focal area objectives noted in paragraph 4.4, and as the GEF learns from the initial programs, successive generations will evolve. A comprehensive approach will be followed in designing projects so that complementarities among Implementing Agencies, and additional global benefits in multiple focal areas, will be achieved. The operational programs will ensure that (a) a number of different types of international waters geographic settings are addressed;[8] (b) the land degradation cross-cutting theme and linkages with other focal areas receives attention; and (c) a more complete range of imminent threats is covered. The GEF also will seek a balance between preventive actions and remedial actions necessary to restore impaired uses of international waters; areas facing serious degradation will receive priority attention for technical assistance, institution and capacity building, and investments.

4.16 Three operational programs will initially be prepared:

(a) Waterbody-based operational program.

(b) Integrated land and water multiple focal area operational program.

(c) Contaminant-based operational program.

These initial operational programs are described below and are included with their associated indicative activities in the annex to this chapter to illustrate characteristic types of projects for each program. Although there will inevitably be some overlap among the programs, each has a defining theme and should provide flexibility for truly country-driven initiatives and appropriate Implementing Agency responses to the specific environmental needs.

4.17 **Waterbody-based operational program.** This operational program involves activities that address the priority transboundary environmental concerns that exist in a specific waterbody, such as a transboundary freshwater drainage basin or a large marine ecosystem. The objective is to help groups of countries to work collaboratively in learning about and resolving priority transboundary water-related environmental concerns. GEF support will help overcome barriers to organizational learning and transactions costs of working together in strengthening or developing a regional institutional framework and in addressing sectoral causes of major water resources problems. Institution building plays a crucial role, and specific capacity-strengthening measures are required to assist countries in finding the appropriate institutional and organizational arrangements. A representative number of freshwater basins (both surface and groundwater transboundary basins) as well as large marine ecosystems (or perhaps limited oceanic areas) will be targeted to ensure balanced coverage of a wide range of geographic and climatic settings.

4.18 Important characteristics of this operational program are: (a) the focus on addressing impairments of the waterbody, such as reducing eutrophication and toxic substances in inland waters; and (b) support for the learning processes for countries to work cooperatively and collectively in addressing imminent threats to their transboundary water resources. As noted in paragraph 4.22, an initial GEF-funded activity to formulate a Strategic Action Program is usually an appropriate first step to help countries define priority problems, establish country and Implementing Agency commitments to specific actions, and agree on additional interventions for their priority transboundary concerns. Following this step, the GEF could fund a capacity-building, technical assistance, or investment project to help harmonize regulatory or policy frameworks, build institutional capacity, or demonstrate implementation of needed interventions.

4.19 **Integrated land and water multiple focal area operational program.** These projects involve the integration of land and water resource management as a primary component of addressing the degradation of international waters. They can involve other GEF focal areas as well as the cross-cutting issue of land degradation (desertification and deforestation). Also in this program are international waters projects that address the special conditions and needs of small island developing states (SIDS). These projects are included for two reasons: integrated freshwater basin-coastal area management is essential for a sustainable future for these island states, and this approach can produce benefits in other GEF focal areas, especially biodiversity. Key features of each regional SIDS international waters project are improvements in integrated freshwater basin-coastal area management on each island of the regional groupings of SIDS, a multiple GEF focal area approach, and a coordinated, programmatic approach among Implementing Agencies according to the comparative advantage of each agency.

4.20 Some countries may wish to address areas of unique or endangered marine biodiversity in a joint biodiversity/international waters multiple focal area project. Such projects rely on integrated freshwater basin-coastal area management for multiple purposes to address the root causes and

sectoral activities that endanger the reefs, wetlands, amd mangroves that serve as nursery areas for the ocean's living resources. These multiple focal area projects might be identified as part of the process of developing an SAP. Pristine or unique areas are eligible for these projects if a country wishes to address current and anticipated imminent threats to prevent damage and if it makes real commitments to policy changes or needed investments as part of an SAP.

4.21 **Contaminant-based operational program.** This program will include activities that help to demonstrate ways of overcoming barriers to the adoption of best practices to limit contamination of international waters. A key feature is that there is no requirement that these projects be tied to a particular multicountry collaborative process, as there is for the waterbody-based operational program. However, collaborative processes should be conducted where an imminent threat exists. Measures to address both ship-related environmental concerns and globally significant toxic pollutants that might be transported over long distances in the atmosphere, rivers, or ocean currents will be included. Some projects may include demonstrations and pilot tests of measures to address pollution discharges from land-based activities (particularly persistent organic pollutants); many of these measures can also be included in technical assistance or investment projects as part of the waterbody-based operational program. Narrowly focused regional or global projects that can help meet particular technical needs or improve the use of certain measures by several groups of international waters projects (and build capacity to undertake the measures) are also included in the program. Targeted technical demonstration and capacity-building projects can help build awareness in recipient countries of international waters concerns as well as best-practice measures, tools for finding solutions, and policies for innovative institutional approaches. For example, priority is placed on demonstrations of economic policy incentives in transboundary basins (see the Annex).

STRATEGIC ACTION PROGRAMS

4.22 To produce global benefits, international waters projects must be transboundary. Where these transboundary concerns, additional needed actions, and incremental costs are not adequately defined, an initial international waters project should be undertaken to formulate an agreed Strategic Action Program (SAP) prior to development of a technical assistance, capacity-building, or investment project. In such cases, SAPs become somewhat analagous to enabling activities in other focal areas. A group of countries would work with one or more Implementing Agencies to first identify priority transboundary water-related environmental concerns and the sectoral policy causes of the problems experienced by the particular waterbody and then formulate an SAP. As described in box 4.1, SAP would contain needed baseline actions (including country commitments for implementation); actions addressing transboundary issues that would be funded in the baseline or by other means such as bilateral assistance, loans, or through regular Implementing Agency programs; and additional actions needed to resolve the transboundary environmental concerns that have incremental costs that the GEF might fund.

BOX 4.1

KEY ELEMENTS OF STRATEGIC ACTION PROGRAMS

1. **Transboundary water-related environmental analysis.** The process for cooperatively preparing a Strategic Action Program (SAP) among countries should start with an analysis of priority transboundary environmental problems. Which ones cause actual degradation? What sectoral activities cause the degradation? What are the information gaps, policy distortions, institutional deficiencies? UNEP often provides support in this element, while the UNDP assists with capacity-building needs, and the World Bank with identification of priority investments and policy reforms. Stakeholder analysis and public involvement are essential.

2. **Relationship to national environmental planning and economic development documents.** National environmental documents and plans will provide valuable input in preparing this analysis as well as identifying priorities among environmental concerns. The analysis of the causes of degradation should include examination of national economic development plans and sectoral economic policies (which establish reasonable actions for sustainable development).

3. **Establishment of clear priorities.** The SAP should establish clear priorities that are endorsed at the highest levels of government and widely disseminated. Priority transboundary concerns should be identified, as well as sectoral interventions (policy changes, program development, regulatory reform, capacity-building investments, and so on) needed to resolve the transboundary problems. Coordination of priorities with those identified under the climate change and biodiversity focal areas could be done during the SAP process. The SAP should provide for a balanced program of preventive and remedial actions, support both investment and capacity-building activities, and identify key activities in the following areas:

- Priority preventive and remedial actions.
- Cross-cutting issues and linkages to other focal areas.
- Institutional strengthening and capacity-building needs.
- Stakeholder involvement and public awareness activities.
- Program monitoring and evaluation.

4. **Establishment of a realistic baseline.** The cooperating countries and the GEF should agree on the baseline environmental commitments (which should be funded domestically or through donors or loans) and what activities are additional for solving the transboundary priority problems. It is important for activities included in the SAP to be realistically costed and consistent with projected availability of domestic and international funding.

5. **Estimating incremental costs.** The elements of the SAP are strategic in nature and will typically yield domestic as well as global benefits. The activities additional to the baseline scenario could be eligible for GEF funding in accordance with GEF incremental cost guidelines in a subsequent technical assistance (capacity-building) or investment GEF project in the focal area.

PROJECT SELECTION CRITERIA

4.23 Country commitment to a comprehensive approach is essential for a project to be included in the international waters portfolio. In addition, transboundary concerns must be identified before a project is eligible for GEF funding. Given the transboundary nature of SAPs, countries may incur additional costs to participate in their preparation. Such costs may relate to joint planning exercises, additional data needs and coordination efforts to ensure that a diverse portfolio is developed and the most serious problems addressed. The following criteria will be applied:

(a) The transboundary concern involves one or more of the imminent threats to international waters (see paragraph 4.1).

(b) Severity of the transboundary problem (ecological significance of damage, human health implications, extent of critical habitat, spatial damage).

(c) Threat of irreversible damage to biodiversity and time scale of reversibility (particularly if threatened or endangered species, such as marine mammals are involved, and if the damage will severely harm the livelihoods of affected populations).

(d) Leveraging of development assistance, international agency cofunding, or private sector or other country commitments to provide associated financing for priority solutions.

(e) Capacity for implementation or plans for inclusion of capacity-building components.

(f) Degree to which the problems are common to other geographic regions and interventions are replicable.

(g) Consistency with national environmental planning documents and international legal obligations.

In addition, country-driven projects with commitments to utilize more comprehensive approaches that address all major contributing sectoral activities will be given priority, as will innovative approaches.

OPERATIONAL PROGRAMS AND INDICATIVE ACTIVITIES: INTERNATIONAL WATERS

1. The international waters focal area is complex because of the many different types of environmental concerns related to water resources, the variety of geographic situations, the linkages among sectoral activities and the resulting environmental stresses, and the opportunities to multiply benefits through integrated approaches with other GEF focal areas and cross-cutting issues. This focal area relies on cooperation among Implementing Agencies as part of specific projects and as well as a significant commitment from each Implementing Agency to target its regular development assistance programs to the international waters project area along with the GEF. These Implementing Agency commitments to action and individual country commitments to baseline and additional specific actions are often contained in Strategic Action Programs (SAPs) developed with GEF assistance. With this complexity and the need to formulate these commitments, three different types of operational programs are initially proposed to provide flexibility in addressing country-driven needs. The following indicative activities illustrate the operational programs.

WATERBODY-BASED OPERATIONAL PROGRAM

2. Projects in this program involve activities that address the priority transboundary environmental concerns that exist in a specific waterbody. They typically begin with support to groups of countries for learning to work collectively and cooperatively in identifying the particular transboundary water-related environmental priorities, reviewing capacity-building needs, and developing an SAP for addressing the priorities. Following formulation of the SAP with its baseline commitments for domestic action, Implementing Agency program commitments, elements funded by other sources, and additional elements for addressing transboundary priorities, the GEF could fund a technical assistance, capacity-building, or investment project (or projects).

Indicative activities

(a) Transboundary freshwater basin projects

Some projects address surface water systems, others address activities related to interactions among surface water and groundwater systems, and a few others address transboundary groundwater systems. Priorities among pollution, habitat degradation, and overexploitation of living resources should first be established jointly by the cooperating countries as part of an SAP. The GEF might then fund the incremental cost of priority elements of the SAP that address the transboundary priorities. This funding could provide cost-shared incentives for leveraging government, private sector, or donor action in implementing priority solutions on the ground. Examples might include: (1) a modest cost share in supporting establishment of an industrial toxics pretreatment program or physical interventions to separate easily treated municipal wastewater from more dangerous industrial wastewater; (2) incremental cost funding for wetland restoration to provide habitats and to mitigate the effects of pollutants before they reach international waters; (3) innovative approaches such as tradable pollution discharge permit

systems or offset programs to cost-effectively improve water quality in shared basins; (4) cost-share best management practice installation for nonpoint source control of land-based pollution in degraded, priority watersheds; and (5) building a human resources capability to strengthen institutions. Hotspots of transboundary degradation may be targeted for funding if information is sufficient to characterize the transboundary nature of the problem and the country (or countries) commit to undertaking the needed measures.

(b) Large Marine Ecosystem Projects

International waters projects in this area are among the most complex GEF projects, and each can have a distinctive approach. However, for consistency with the operational strategy, groups of countries wishing to cooperate on coastal and marine resources should undertake an SAP development project to fully assess linkages among marine, coastal zone, and freshwater basin waters and their ecosystems to determine priority transboundary environmental issues, root causes of degradation, and the array of measures needed to address them in an SAP. Integrated freshwater-coastal area management measures are important for protecting large marine ecosystems. In hotspots of transboundary environmental damage, targeted technical assistance or investment international waters projects are encouraged to address serious problems. If only several of a larger number of riparian countries wish to proceed, formulation of an SAP would be a useful, incremental first step. In addition, cooperating countries may wish to jointly address environmental problems of an oceanic area not included in a large marine ecosystem. Technological advances are being introduced that use information technology and computer simulation to help make critical management decisions for marine resources. In addition, institutional tools such as the Code of Conduct for Responsible Fishing consistent with the U.N. Convention on the Law of the Sea are also becoming available.

INTEGRATED LAND AND WATER MULTIPLE FOCAL AREA OPERATIONAL PROGRAM

3. These projects involve the integration of land and water resource management as the primary component of addressing the degradation of international waters and often involve multiple GEF focal areas and the cross-cutting issue of land degradation and desertification. Also in this program are international waters projects that address the special concerns of small island developing states. These projects are included because integrated freshwater basin-coastal zone management is essential for a sustainable future for these island states and because this approach can produce benefits in multiple GEF focal areas. Biodiversity protection considerations are often important elements of these projects because of inherent linkages between the sectoral activities and the status of biodiversity. In this manner, biodiversity protection issues can be integrated into the thinking of sectoral managers (water resources engineers, for example) to ensure that these managers do their part in protecting aquatic and marine ecosystems; and their knowledge, skills, and attitudes can be developed through training elements of each project.

Indicative activities

(a) Small island developing states

Small island developing states (SIDS) have special conditions and needs that were recently identified for international attention in the Barbados Programme of Action for the Sustainable Development of Small Island Developing States. It is appropriate for the GEF to fund regionally focused programmatic approaches aimed at a specific regional group of SIDS to achieve global environment benefits. Key features of each GEF SIDS project are improvements in integrated freshwater basin-coastal zone management on each island of the regional groupings of SIDS, a multiple GEF focal area approach, and a coordinated Implementing Agency approach according to the comparative advantage of each Implementing Agency. Activities concerning international waters could be targeted at the six major issues that most SIDS have in common (coastal area management and biodiversity, sustainable management of regional fish stocks, tourism development, protection of water supplies, and land and marine-based sources of pollution and vulnerability to climate change). Regional groups of SIDS often share access to marine resources and experience common water-related environmental problems (such as saltwater intrusion into groundwater supplies as a result of rising oceans) that can be addressed through the GEF in the context of altering sectoral activities on each island state to meet sustainable development goals. SIDS share common environmental problems and solutions to those problems that reflect the partnership between their representative regional organizations and the capacity and institutional building needed on each island state to more comprehensively address these problems. One example is oceanic fisheries that are located near groups of SIDS and the additional measures needed to ensure their sustainable management. This is a complex issue because the fish might travel in a particular portion of oceanic waters during one season but rely on coastal waters and wetlands of the SIDS for reproduction and nursery areas in other seasons. Advances in data collection and analysis systems, use of information technology, and involvement of the scientific community to assist in addressing these issues is central to these regional projects.

(b) Land degradation cross-cutting area

A special linkage exists between land degradation in dryland areas and management of both surface and ground water resources in transboundary drainage basins. Rehabilitation of damaged catchments and adoption of sustainable land-use systems will be priorities. In addition, opportunities exist for deriving global environment benefits in other focal areas such as climate change and biodiversity, with reforestation or carbon sequestration projects being an important element of an international waters project designed to address land degradation. Improved watershed and catchment management, sustainable land-use and conservation systems, and changes in sectoral development and economic policies can be essential in addressing transboundary water-related environmental concerns related to land degradation. Especially in arid and semi-arid regions, land degradation can be linked with changes in climate and river flow regimes, which can also result in degraded subsurface water supplies, some of which have transboundary recharge basins. Support for preparation of water resources management strategies by riparian countries for a transboundary dryland basin is a common characteristic of these projects, to allow harmonizing of sectoral water uses among basin countries in an

environmentally sustainable manner. Once the root causes pertaining to sectoral uses of water are resolved, and commitments to take action are made, other environmental issues can be addressed.

(c) Multiple Focal Area Projects

GEF projects integrating several focal areas have the potential to multiply global benefits from GEF interventions. For example, wetland restoration and protection initiatives can provide benefits for both biodiversity protection and water quality improvement. Biodiversity protection and carbon sequestration have potential linkages and important roles in restoring damaged transboundary basins. In areas with globally significant biodiversity concerns, especially unique coastal areas, wetlands, and coral reefs, multiple focal areas projects (biodiversity and international waters) might be appropriate for addressing current and anticipated imminent threats in order to prevent environmental damage before it occurs, if country commitments to action are expressed in SAPS. Mechanisms for networking among agencies and institutions with primary interest in different focal areas are essential in this type of program.

CONTAMINANT-BASED OPERATIONAL PROGRAM

4. Projects in this program help to demonstrate ways of overcoming barriers to adoption of best practices that can address transboundary environmental concerns. Measures for addressing ship-related environmental concerns and for addressing globally significant toxic pollutants that might be transported over long distances in the atmosphere, rivers, or ocean currents are involved in these projects. While some projects include demonstrations and pilot tests of measures to address pollution discharges from land-based activities, many of these measures can also be included in technical assistance or investment projects as part of the waterbody-based operational program. Narrowly focused global or regional projects that can help meet the technical needs of groups of international waters projects or build awareness and capacity are also included in this program. Demonstration projects or project elements that test the use of innovative policies or economic instruments such as tradable pollution reduction allocation systems would be a priority for the GEF.

Indicative activities

(a) Global pollutant projects

Some toxic pollutants that are persistent in nature can be considered as "global pollutants" because they are transported long distances in the atmosphere before falling to earth. They can accumulate in living organisms and can pose human or ecosystem health risks. Some of these pollutants are associated with certain industrial sectors or processes across the world. Individual international waters cannot be cleaned up through regional action because this would place the countries or enterprises at an economic disadvantage in world markets. Substances such as mercury, dioxin, PCBs, persistent organic pollutants, and some pesticides that can disrupt human endocrine systems might be candidates for global action in global pollutant projects.

(b) Threats related to shipping

Activities related to abatement of pollution from ship-based chemical washings and interventions against the transfer of noxious, nonindigenous species in ballast water are priorities for the GEF because they are virtually unaddressed problems. Although GEF support for oil-related interventions could continue in priority waterbodies designated as part of the International Convention for the Prevention of Pollution from Ships as special areas, the GEF would require that these projects lead to self-financing of capital and operating costs on the polluter-pays principle through full cost recovery schemes and innovative mechanisms for private sector financing. GEF participation could then have a catalytic effect on such self-financing schemes.

(c) Regional or global technical support projects

The complexity of international waters projects raises technical questions about how and what contaminants to monitor, how to analyze complex sets of data, where to get help, and how to involve the public in decisionmaking. Targeted regional or global capacity-building projects may be necessary to help increase awareness on how to address these contaminant problems. Countries would benefit from an iterative approach if activities took place in one country after another. In addition, these projects may improve the GEF project success rate and the sustainability of interventions by giving personnel the skill, awareness of best practices, and knowledge necessary to solve problems that may be common to countries, regions, and GEF projects. Demonstration or pilot projects may be tested in this operational program, in which case the projects will be consistent with paragraph 1.19.

NOTES

1. From the Mar del Plata Conference in the 1970s and the Law of the Sea Convention in the 1980s to the Dublin Statement, the Earth Summit, and the Noordwijk (World Coast Conference) Statement in the 1990s, the world's water resources specialists have recognized that a more comprehensive, cross-sectoral approach to managing water resources is needed to achieve sustainable development.

2. The 1982 U.N. Convention on the Law of the Sea (UNCLOS) provides a global framework for the protection and management of the marine environment and its living and nonliving resources and recognizes that global environmental objectives are achieved by actions taken in a region-by-region framework. There also is a network of more specific international legal instruments on the marine environment as well as nine Regional Seas Conventions and their Protocols.

3. A large number of bilateral and multilateral agreements and management authorities were established before environmental considerations came to the fore. Sound protection of water resources and their sustainable use as well as the protection of their associated ecosystems need to be incorporated into these institutional arrangements to meet sustainable development goals.

4. Conventions and agreements relating to land-based sources of pollution, port reception facilities, coastal dumping, offshore facilities, emergency response, marine fisheries, protected areas designations, hazardous substance transport and disposal, international trade, endangered species, and the biodiversity, climate change, and desertification conventions all play a role in achieving global protection of international waters. Four new initiatives and their associated action programs also have special linkages. The Barbados Programme of Action for the Sustainable Development of Small Island Developing States, the Intergovernmental Conference on the Protection of the Marine Environment From Land-Based Sources of Pollution (currently scheduled for adoption as the "Washington Programme of Action" in late 1995), the U.N. Convention to Combat Desertification, and the recently negotiated Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks (with parallel negotiations on a technically oriented Code of Conduct for Responsible Fishing, consistent with UNCLOS) have action programs associated with them. These initiatives provide a new opportunity for cooperating nations to link many different programs and instruments into regional comprehensive approaches to address international waters.

5. United Nations Conference on Environment and Development, Agenda 21 (New York: UNCED, 1992).

6. Numerous stakeholders are involved in the design and implementation of international waters projects, and their involvement will differ at each level of planning and administration. Participation of these various stakeholders (including the private sector) within and across countries can improve the quality, effectiveness, and sustainability of projects. However, there is a need to identify the key stakeholders through a stakeholder analysis, as well as the levels at which their involvement will be critical and the means to ensure their effective participation. Linkage through computer-based networks is a promising technique. Interministerial coordination is essential so that actual changes can be made in sectoral activities.

7. Nonindigenous species and chemical washings are included because of their potentially devastating effects and lack of action. Spill contingency planning and deballasting for oily waters are well known and might be considered "baseline" interventions. Further action on oil-related marine pollutants should await the lessons learned from the pilot phase, where over 50 percent of international waters funding was allocated to ship-related projects.

8. These settings refer to different types of international waters projects (freshwater basins vs. large marine ecosystems) in different parts of the world to produce a diverse, representative portfolio.

CHAPTER FIVE

OZONE LAYER DEPLETION

5.1 The stratospheric ozone layer is a protective shield that absorbs most of the ultraviolet radiation that could harm living organisms on earth. Stratospheric ozone is constantly being created and destroyed by natural photochemical processes that are in dynamic equilibrium. This equilibrium has been disrupted by the release of anthropogenic chemicals--especially chlorine and bromine compounds such as chlorofluorocarbons (CFCs), halons, and a broad range of industrial chemicals used as refrigerants, foaming agents, aerosol propellants, fire retardants, solvents, and fumigants.

5.2 As a result of these chemical processes, the ozone layer is being depleted. Scientific observations show significant depletion throughout the year in both the northern and the southern hemispheres at middle and high latitudes,[1] although not yet at the tropics. This depletion allows more ultraviolet-B radiation to reach the ground, which could raise the incidence of skin cancer, cataracts, and other irreversible eye damage and suppress the immune system. In addition, even minor increases of ultraviolet-B radiation could disrupt ecological food chains, affecting agriculture, fisheries, and biological diversity.

5.3 Governments responded to concerns about ozone depletion by adopting the Vienna Convention on the Protection of the Ozone Layer (Vienna Convention) in 1985, the Montreal Protocol on Substances that Deplete the Ozone Layer (Montreal Protocol) in 1987, and amendments to the protocol in London in 1990 and Copenhagen in 1992. By June 1995, more than 150 countries had ratified the Montreal Protocol. These agreements have significantly slowed the atmospheric accumulation of several major ozone-depleting substances. For example, worldwide production and consumption of CFCs decreased by more than 50 percent between 1986 and 1994. Many of the remaining major producers and consumers of CFCs and other ozone-depleting substances are the GEF-eligible countries that are required by Montreal Protocol regulations to phase out major ozone-depleting substances at the end of 1995. There is a risk that, unless assisted financially, these countries will continue to produce and use such substances and therefore negate much of the ozone layer protection that has already been achieved.

5.4 Ozone depletion is also linked to other global environmental problems. For example, both ozone and ozone-depleting substances are greenhouse gases. While the major ozone-depleting substances have very strong global warming potentials,[2] the ozone depletion they have caused has had a net cooling effect that offset about 20 percent of the radiative forcing due to the atmospheric accumulation of greenhouse gases between 1980 and 1990. In restoring the ozone layer, it will be necessary to minimize the global warming that might be caused by substitutes for such substances. The relationship with biodiversity is more direct: protection of the ozone layer is a prerequisite for conservation and sustainable use of biodiversity. Ozone layer depletion, leading to increased ultraviolet radiation at the Earth's surface, would endanger species already under threat and biological diversity in general.

5.5 The GEF operates, on the basis of collaboration and partnership among its Implementing Agencies, as a mechanism for international cooperation for the purpose of providing new and

additional grant and concessional funding to meet the agreed incremental costs of measures to achieve agreed global environmental benefits in (among other focal areas) ozone depletion.[3] Global environmental benefits will be in the form of the reduced risks of adverse effects. The GEF operational strategy for ozone depletion sets out the way in which the GEF, through the provision of finance and within its own mandate and according to its general policies, can assist eligible recipient countries to undertake activities to reduce ozone depletion.

5.6 The GEF's objective in ozone depletion is to contribute to measures that protect human health and the environment against adverse effects resulting, or likely to result from, human activities that modify or are likely to modify the ozone layer.[4] The GEF's assistance in preventing the release of ozone-depleting substances will be in accordance with countries' commitments to the Montreal Protocol concerning phaseout schedules and control measures.

CONVENTION GUIDANCE

5.7 Although the GEF is not linked formally to the Montreal Protocol, the GEF operational strategy in ozone depletion is an operational response to the Montreal Protocol, its amendments, and adjustments.

5.8 Therefore, the GEF will use the Montreal Protocol as its guidance, specifically:

(a) The list of control measures.
(b) The list of controlled substances:
(c) The phaseout schedules for ozone-depleting substances and the amendments and adjustments that are approved from time to time by the Meeting of the Parties.

The Montreal Protocol contains agreed schedules for reduction of the production and consumption of specified "controlled substances" that deplete the ozone layer[5]. The London Amendment and the Copenhagen Amendment established a financial mechanism, the Multilateral Fund, to provide developing countries with financial and technical assistance.[6] These amendments also require that the financial mechanism uses the "agreed incremental cost" approach to financing measures.[7] Taking into account the urgency of further steps to protect the ozone layer, the fourth Meeting of the Parties to the Montreal Protocol in Copenhagen in 1992 adopted further adjustments and an amendment to speed the phaseout of ozone-depleting substances.

5.9 To the extent consistent with other GEF policies (such as those on project cycle and incremental cost), GEF operational policies for financing activities in this focal area will also be consistent with those of the Multilateral Fund.[8]

5.10 In accordance with the GEF Instrument,[9] the GEF Secretariat has exchanged letters with the secretariats of the Montreal Protocol and the Multilateral Fund that show areas of cooperation such as coordination of activities; exchange of information of mutual interest, methodologies, and methods of project assessment; and interpretation of relevant decisions of the Parties to the Protocol. This cooperation will facilitate consistency and complementarity with operations to phaseout ozone-depleting substances within the legal ambit of the Montreal Protocol.

GEF-FINANCED ACTIVITIES

5.11 The overall thrust of the ozone depletion portfolio is to support activities to phase out ozone-depleting substances that are committed under the Montreal Protocol, with special emphasis on short-term commitments and enabling activities. Because of the short deadlines for this phaseout, all measures will be considered under criteria for short-term response resources.

COUNTRY ELIGIBILITY

Complementarity

5.12 The Multilateral Fund provides assistance only for (a) developing countries operating under Article 5, paragraph 1 of the Montreal Protocol; and (b) activities incurring eligible expenditures.[10] In conformity with the principle of complementarity--avoiding duplication of effort and not substituting for other sources of funds--the GEF will provide only complementary assistance outside the financial mechanism. This means, in effect, that the GEF will assist otherwise eligible recipient countries (a) that are not Article 5 countries;[11] or (b) whose activities, while consistent with the objectives of the Montreal Protocol, are of a type not covered by the Multilateral Fund.[12]

Ratification and compliance

5.13 To be eligible, countries must also be Parties to the Montreal Protocol, have normally ratified the London Amendment,[13] and have fulfilled their obligations to report on the production consumption of ozone-depleting substances and trade according to the requirements of the Protocol.[14] In cases of noncompliance with the control measures of the Montreal Protocol (as adjusted and amended), any funding is subject to formal justification to the Parties through the Protocol's Secretariat or Implementation Committee. This justification must include the causes of noncompliance, assessments of expected delays in the implementation of control measures, and a revised schedule of commitments. The clarification of arrears in contributions to the Multilateral Fund of the Montreal Protocol and demonstration of the needs for assistance must be included in those cases where obligations of the recipient country are defined under Article 2 of the protocol. GEF assistance will be in line with the "Indicative List of Measures that might be taken by a Meeting of the Parties to the Montreal Protocol in respect of noncompliance with the Protocol" and consistent with related recommendations of the Protocol Parties.[15]

SYNERGISM

Climate change

5.14 There are two potential ways in which the phase out of ozone-depleting substances might add to the risk of climate change. The first is the use of substitutes that have a high global warming potential. The second is the introduction of less energy efficient technologies that do not use ozone-depleting substances. If energy is supplied from fossil fuels, decreasing energy efficiency would increase emissions of greenhouse gases. Therefore, the GEF will fund the conversion to the technology with the least impact on global warming that is the technically feasible and economically acceptable.[16] The GEF will discourage the use of any transitional substitutes that have a remaining ozone depleting potential and a significant global warming potential.

Biodiversity

5.15 One potential way that GEF operations in the biodiversity focal area might add to ozone depletion would be through the use of methyl bromide as part of an integrated pest management program. Such programs will not be funded.

ENABLING ACTIVITIES

5.16 To minimize ozone depletion, all countries must understand the scientific, technical, legal, and financial aspects of the issue; systematically assess their options; and plan measures to phase out ozone-depleting substances. Where Country Programs do not exist, the GEF will fund activities to enable countries to prepare these programs.

5.17 The United Nations Framework Convention on Climate Change defined the concept of "enabling activities" in the context of climate change, although the term has been applied to other focal areas as well.[17] In general, enabling activities have as a common element the communication of information and include planning and endogenous capacity building, including institutional strengthening, training, research, and education to facilitate implementation of effective response measures, in accordance with the relevant Convention. The GEF will finance selected Country Programs, similar to those required for financing under the Multilateral Fund, since they match the definition of "enabling activities." Such Country Programs are required only as an enabling response to the Montreal Protocol, and the incremental cost of producing them is in fact the full cost.

5.18 In the ozone depletion focal area, an integrated interagency operational approach to implementing Country Programs will be developed that sets out:

(a) Elements of country programs (for example, application of data provided in accordance with requirements of the Montreal Protocol on the production, use, trade, and consumption of ozone depleting substances;[18] assessment of national options; and a phaseout plan in accordance with the phaseout schedules set out in the protocol).

(b) Activities completed, under way, or planned and their elements and funding sources (to promote complementarity and avoid duplication).
(c) Cost norms.
(d) Proposed activities.

5.19 The United Nations Development Programme (UNDP) and the United Nations Environment Programme (UNEP) will collaborate in the preparation of Country Programs. Specifically:

(a) The UNDP will identify investment projects and will have responsibility for all technical assistance, in particular that related to project identification, analysis, and initial formulation (preappraisal). During the preparation of Country Programs the UNDP will consult regularly with the World Bank in order to ensure consistency with information requirements for planning of investment projects. The UNDP may also provide technical assistance for implementation of elements of a Country Program that will be financed by national sources.

(b) The UNEP will provide relevant information and training, as the basis for preparation and implementation of Country Programs. The provision of support for such enabling activities shall be demand-driven within specified budget parameters.

Country Programs developed with GEF assistance will be made available to the Parties of the Montreal Protocol trough the Ozone Secretariat by the Implementing Agencies concerned.

5.20 The World Bank will develop and manage the investment projects, namely, the short-term measures to phase out ozone-depleting substances set out below.

SHORT-TERM PROJECTS TO PHASE OUT OZONE DEPLETING SUBSTANCES

5.21 GEF funding for phaseout measures will be based on a nationally approved Country Program, submitted by the recipient government to the GEF secretariat. The Country Program should include country commitments to fulfill control measures as specified in the Montreal Protocol, as amended and adjusted, and a detailed workplan of all necessary steps (including projects) to ensure compliance with the Protocol. Government approval of the Country Program is required at least at the cabinet level. The content of the Country Program must be consistent with the guidelines developed by the Multilateral Fund and endorsed by the fourth Meeting of the Parties to the Montreal Protocol.[19]

Eligible Expenditures

5.22 The incremental costs of the following activities are eligible for GEF financing:

(a) Expenditure items in accordance with the Indicative List of the Montreal Protocol.[20]
(b) Other activities consistent with the objectives of the Montreal Protocol in accordance with the GEF policy on incremental costs, especially taking into account incremental benefits[21] arising from technology upgrades in production facilities included in several technology conversions to phase out ozone-depleting substances.[22] In

particular, conversions that are economic in their own right are not eligible for any GEF grants.

5.23 So as not to exceed the terms of the parallel operations of the Multilateral Fund, other expenditure eligibilities will also apply.

(a) Retroactive financing

Expenditures should follow Council consideration of a project. However, to avoid delays in projects that are ready for implementation, and to encourage immediate preparations to phase out ozone-depleting substances certain expenditures will be considered for retroactive financing on a case by case basis. These expenditures:

(1) Will only relate to projects that were neither completed nor ongoing at the time the Implementing Agency identified the proposed project.
(2) Will not exceed 10 percent of the total eligible GEF grant for a particular enterprise.
(3) Will not have been committed more than 12 months prior to the approval of the relevant GEF work program by the Council.

(b) Exports

Eligible expenditures are affected by the extent to which the recipient enterprise produces ozone-depleting substances for export to a country that either is not eligible to be a GEF recipient; or is eligible to receive assistance from the Multilateral Fund. Such exports are the "relevant exports" for calculating the eligible expenditures, as follows:

(1) The GEF will not finance expenditures of an enterprise whose relevant exports account for more than half of its production.
(2) If relevant exports account for less than half of production, the GEF will finance a pro rata share of the expenditures.

(c) Ownership

Expenditures of enterprises located in tax-free zones, or fully owned by transnational corporations based in non-GEF-eligible countries, or in countries that are not Parties to the Montreal Protocol, are not eligible for GEF financing. Expenditures of enterprises that are partially owned by local interests will be reimbursed in the same proportion as the local ownership. If local ownership is less than 20 percent, GEF assistance will not be considered.

(d) Operational costs

Net operational costs (operational costs in excess of operational savings) are not eligible for GEF financing.

(e) Increases in use of ozone-depleting substances

Only enterprises that used ozone-depleting substances when the Montreal Protocol entered into force in the concerned country are eligible for GEF financing. Financial assistance will be provided only for the amount of ozone-depleting substance that was being consumed at the time of project appraisal, or at the time of ratification, whichever is less.

Criteria for Short-Term Response Measures

5.25 Proposed measures will satisfy the following criteria:

(a) Cost-effectiveness

The measures will ensure the maximum phaseout of ozone-depleting substances with the minimum of GEF funding. The least-cost means of phaseout will be used within each subsector and country. Therefore, the unit costs of phaseout would rise as the implementation of a country program progresses, because with lower unit costs projects will be implemented first. Unit phaseout costs of Multilateral Fund projects that correspond to the country's phaseout stage and the technology used will be used as benchmarks for the costs of proposed GEF projects and will be reported at the same time. Where a proposed GEF project has a lower cost-effectiveness than comparable projects of the Multilateral Fund, explicit justification for the disparity in the project document will be required.

(b) Likelihood of success

Projects should have a very high likelihood of success. Supporting assessments of technical and institutional risk will be required to demonstrate the economic\sustainability of the ultimate recipients of GEF grants. Only financially viable enterprises will be eligible.

(c) Country integration

Proposals should be country-driven and emerge as national priorities in the Country Program.

(d) Nontoxicity

Toxicity of several substitutes for ozone-depleting substances will be taken into account, particularly during project preparation and implementation, based on environmental impact assessments, according to policies of the Implementing Agencies and in line with best environmental practice.

Initial Emphasis

5.26 Initially, projects will be chosen to emphasize:

(a) The greatest reduction of ozone-depleting substances for the lowest cost within each recipient country.

(b) Avoidance of noncompliance with agreed control measures under the Montreal Protocol.

(c) Minimization of the period of noncompliance with the Montreal Protocol, as adjusted and amended.

(d) Complete phaseout of ozone-depleting substances (except for essential uses) in entire sectors or countries.

(e) Achievement of additional global environmental benefits in other GEF focal areas.

NOTES

1. Scientific assessment of ozone depletion 1994, Report of the Scientific Assessment Panel, UNEP March 1995.

2. These vary from 4,000 for CFC-11 to 11,700 for CFC-13 (on a 100 years' time horizon). See Scientific Assessment of Ozone Depletion 1994, Report of the Scientific Assessment Panel, UNEP March 1995.

3. Global Environment Facility, 1994. Instrument for the Establishment of the Restructured Global Environment Facility, GEF, Washington, D.C. para 2(a).3. Vienna Convention for the Protection of the Ozone Layer, Article 2.5. Montreal Protocol, Article 2 A - 2H.6. The mechanism became permanent after the Copenhagen meeting in 1992.7. Montreal Protocol, Article 10 , paragraph 1 as amended by decision II/8 of the Second Meeting of the Parties.8. Technical consistency of GEF projects with relevant guidance used within the Multilateral Fund of the Montreal Protocol would be ensured by using the same technical expertise for technical review. In this regard those technical advisors who are involved in the technical review of Multilateral Fund projects are being included into the STAP roster.

4. Vienna Convention for the Protection of the Ozone Layer, Article 2.

5. Montreal Protocol, Article 2A-2H.

6. The mechanism became permanent after the Copenhagen meeting in 1992.

7. Montreal Protocol, Article 10, paragraph 1 as amended by decision II/8 of the Second Meeting of the Parties.

8. Technical consistency of GEF projects with relevant guidance used within the Multilateral Fund of the Montreal Protocol would be ensured by using the same technical expertise for technical review. In this regard those technical advisors who are involved in the technical review of Multilateral Fund projects are being included into the STAP roster.

9. GEF Instrument, paragraph 21(f).

10. In accordance with Decision IV/5 of the Fourth Meeting of the Parties to the Montreal Protocol which established a list of eligible activities in an indicative list.

11. Many CEITs, but not all, are outside the financial mechanism. Article 5 defines eligibility in terms of per capita consumption of ozone-depleting substances, and some CEITs (such as Romania) are eligible under the Multilateral Fund.

12. Subject to Council consideration of an overall policy on research and monitoring, such activities could include a project such as the Latin America regional project in the Pilot Phase Monitoring and Research Network for Ozone and Greenhouse Gases in the Southern Cone.

13. Modest technical assistance to enable country program preparation may be provided after Montreal Protocol ratification even the process of ratifying the London Amendment has not been finalized.

14. Montreal Protocol, Article 7.

15. Decision IV/5 of the Fourth Meeting of the Parties to the Montreal Protocol.

16. The assessment shall be based on the "Total equivalent Warming Impact" concept.

17. See the chapter on Policy Framework for the concept of an enabling activity, and for the comparable elements and approach to make the concept operational in the concerned focal areas.

18. Montreal Protocol, Article 7.

19. Decision IV/18 of the Fourth Meeting of the Parties to the Montreal Protocol.

20. As approved in Decision IV/18 of the Fourth Meeting of the Parties to the Montreal Protocol.

21. There is a general presumption that countries eligible for GEF financing in the ozone layer focal area may not require assistance for general capacity building or institutional strengthening. Proposals for such assistance will be considered on their merits, on a case-by-case basis.

22. This restriction parallels that of the Multilateral Fund, which provides that exports to non-Article 5 countries affect the eligible expenditures.