Review of Financial Arrangements in GEF–Supported Biodiversity Projects

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List of Acronyms

ADB	Asian Development Bank
AGEREF	Association pour la Gestion des Resources Naturelles et de la Faune (Association for the Management of Natural Resources and Wildlife), Côte d'Ivoire
AIV	Association Inter-Villageoise (Inter-Village Association), Côte d'Ivoire
APPTA	Asociación de Pequenos Productores de Talamanca (Small Farmers Association of Talamanca), Costa Rica
ASACODE	Asociación San Migueleña de Conservación y Desarrollo (San Miguel Conservation and Development Association), Costa Rica
BCMP	Biodiversity and Conservation Management Project, Romania
BZDC	Buffer Zone Development Council, Nepal
CAC	Cellule Autonome de Coordination (Independent Coordination Group), Côte d'Ivoire
CAF	Corporación Andina de Fomento (Andean Development Corporation)
CBTC	Corredor Biológico Talamanca Caribe (Talamanca-Caribbean Biological Corridor), Costa Rica
CBD	Convention on Biological Diversity
CDM	Clean Development Mechanism
CER	Certified Emissions Reduction
CFP	WCS's Conservation Finance Program
CI	Conservation International
DNBC	Directorate of Nature and Biodiversity Conservation, Romania
ECA	World Bank's Europe and Central Asia Department
GEF	Global Environment Facility
GEFME	Global Environment Facility Monitoring and Evaluation unit
GEFSEC	Global Environment Facility Secretariat
GEPRENAF	Projet de Gestion Participative des Ressources Naturelles et de la Faune (Community-Based Natural Resources and Wildlife Management Project), Côte d'Ivoire
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit (German Agency for Technical Cooperation)
IA	GEF implementing agency
IBRD	International Bank for Reconstruction and Development
IDB	Inter-American Development Bank
IFC	International Finance Corporation
IPG	Interagency Planning Group on Environmental Funds
IUCN	The World Conservation Union
KMTNC	King Mahendra Trust for Nature Conservation, Nepal
LAC	World Bank's Latin American and the Caribbean Department

LULUCF	Land-Use, Land-Use Change and Forestry
MDB	multilateral development bank
NGO	non-governmental organization
NTFP	Non-Timber Forest Product
ODA	Overseas Development Assistance
OECD	Organisation for Economic Co-Operation and Development
PCF	Prototype Carbon Fund
PCR	Project Completion Report
PIR	Project Implementation Report
PLAC	Programa Latinoamericano del Carbono (CAF's Latin American Carbon Program)
PMA	Park Management Authority, Romania
RCI	Republic of Côte d'Ivoire
TNC	The Nature Conservancy
TRCP	Tiger-Rhinoceros Conservation Project, Nepal
UNDP	United Nations Development Programme
UNEP	United Nations Environmental Program
USAID	United States Agency for International Development
WB	World Bank
WCS	Wildlife Conservation Society
WCS CFP	Wildlife Conservation Society Conservation Finance Program
WWF-I	World Wide Fund for Nature - International
WWF-US	World Wildlife Fund - US
ZASP	Zone agro-silvo-pastorale (Agro-forestry and pastoral zone), Cote d'Ivoire
ZBD	Zone de Biodiversité (Biodiversity Zone), Cote d'Ivoire

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Executive Summary

This study was prepared as part of the Global Environment Facility Monitoring and Evaluation (GEFME) work program for 2002. The rationale for the study emerged from the findings and conclusions of several earlier evaluations that suggested biodiversity initiatives supported by the GEF needed to become financially self-sufficient after completing the GEF-funded phase. Although GEF projects have been successful in using trust funds to secure reliable, long-term funding, there are many other examples and experiences of financial arrangements currently under implementation that could offer other options for project proponents throughout the world. The GEF, as an institution, needs to assess, highlight, and learn from these experiences.

Objectives

Financial arrangements have been used generally to address two related issues surrounding biodiversity conservation: (a) the need to meet the costs of the conservation project itself, and (b) the desire to share the economic benefits that effective biodiversity conservation can bring to communities and society in general. Because of the amplitude of the topic, the scope of the study was limited from the outset to the first issue. An in-depth review of environmental funds also was excluded from this study, given that they were explored in a separate study in 1999. In this context, and recognizing that many studies have been completed on the broader issues of environmental financing and economics, this study builds upon these documented and verified experiences and focuses on a few specific questions aimed at: (i) identifying sustainable finance options for the conservation and use of biodiversity; (ii) assessing the use of financial arrangements in GEF projects; (iii) reviewing the most relevant financial arrangements for proponents of GEF projects to consider relative to design and implementation; and (iv) synthesizing the main lessons learned and providing guidelines for project proponents and recommendations for the GEF. These questions were addressed at three levels: first, through a general review of the GEF biodiversity portfolio from a consolidated data set; second, by a review of the available documents in a sample of 18 projects selected by the Implementing Agencies (IAs); and third, through field visits to four projects and a subsequent cross-case analysis.

This document consists of three parts. The first presents the context and scope of the study. It defines the concept of financial arrangements used and presents a list of the outputs. The second part presents a conceptual framework for developing a comprehensive sustainable finance solution for biodiversity projects. This framework was used in the background to conduct the study. The third section presents the main findings of the study, including the portfolio review, a more in-depth look at the sample of 18 projects selected by the IAs, and the integrated analysis of four case studies. The main outputs of the study include: a literature review, the overall review of the GEF biodiversity portfolio, the review of sample projects, the in-depth review of four case studies/ projects, a database on financial arrangements, and a communication and dissemination strategy. More details and specific information on these products is presented in the annexes and appendices. These documents are included in the attached CD-ROM.

Definitions

For the purposes of this study, financial arrangements were defined as a means of generating revenues or securing income that is supported by the project

through grants, debt, and/or equity investments for the purpose of providing funding to support—directly or indirectly—project outcomes. Using this definition, the study organized the revenue-generating activities in GEF-supported projects into three broad operational categories (as opposed to a classification of financial arrangements by sectors or industries). There is some overlap between them, but in general these categories bring together instruments or transactions that have similar design and implementation requirements.

- **Business enterprises.** Any and all types of businesses are included under this category. Among the most common are lodging, tour guide and food services, sustainable agriculture, merchandising and retail, and others.

- **Financial Investments.** These involve the investment of assets in a wide range of financial instruments, such as endowment and sinking funds.

- **Property-based transactions.** When the financial arrangement deals with the sale, rent, or transfer of ownership of a particular piece of real estate or rights over the use of natural resources, it is placed under this category.

General Portfolio Review

A review of the consolidated GEF biodiversity portfolio data, which included 212 full size and medium-size projects under implementation as of June 2001, has shown an increase in the use of *business enterprises* as a financial arrangement. In many cases those financial arrangements have been aimed not at generating revenue, but reducing the threat to biodiversity from local communities by providing them with income-generating alternatives. In those cases, establishing a long-term funding base for the project itself has been a secondary objective or, in some cases, has not been taken into consideration. When *financial investments* have been used, however, they tended to be more focused on generating funds for the project itself. *Property-based transactions* have been rarely utilized.

From the general review of the projects in the GEF database, several general patterns and trends emerged. Older and/or smaller (in funding and duration) projects tended to use fewer financial arrangements. More recent projects, such as the Komodo Collaborative Management Initiative (Indonesia) and the Asian Conservation Foundation (Philippines), have shown a great deal of innovation and sophistication in their design and promise to be quite successful in implementation. Of the revenue-generating arrangement categories, business enterprises were frequently present, with ecotourism being the type of business most often proposed and adopted as a source of long-term funding. However, the information available did not enable determining how successful these ventures were.

Project Sample Review

The desk review of the sample of 18 projects selected by the IAs focused on three main aspects: (a) the early assessment activities, which include, among others, the process by which financial arrangements were selected and their feasibility evaluated; (b) the actual design process, including the studies and activities undertaken to structure the operation of the financial arrangement, such as preparation of a business plan; and (c) the implementation arrangements including, but not limited to, schedules, budgets, and, most importantly, staffing.

Although it was difficult to evaluate the analysis of options and feasibility assessments because project documents typically do not include that type of information, it appears that the experience of other projects and general information exchanges played an important role in the decision to adopt one type of financial arrangement over another. The documentation of the design process also was not sufficient to evaluate its completeness, even though it was apparent that some of the projects had done significant work in this area. Many of the projects did include well-developed capacity building components; however, they often stopped short of the actual investments on the financial arrangements themselves.

It was also observed that many of the financial arrangements put in place were aimed at managing threats to biodiversity by surrounding communities and other users, with some focusing revenue-generating activities on expanding the project's funding base to support the project outcomes. Finally, financial arrangements tended to be designed and implemented late in the project implementation phase,

leaving little time for them to become consolidated and generate the financial returns on which project activities rely to become self-sustaining.

Cross-Case Analysis

From the sample of 18 projects described above, four[1] were selected for field visits and a more thorough analysis. These projects were chosen for their best practices on financial aspects by the IAs. Given that all of them were still under implementation at the time of the field visits, no conclusion can be reached regarding the long-term effectiveness of the financial arrangements being implemented. However, much was learned about how financial arrangements were selected and designed and how they are being implemented. In some, it is possible to draw some preliminary lessons from the early stages of implementation.

The most frequent financial arrangement identified in the four case studies was business enterprises in the form of small community-based enterprises, private investments in small and medium enterprises, and both community and private investments in ecotourism. Many of these enterprises were used as a means to secure the long-term financial viability of the projects as well as to mitigate some of the threats to biodiversity the projects aim to protect. This is consistent with the trend observed in the general portfolio review and the project sample review.

Other types of financial arrangements were also present in the projects, but formed a secondary tier of financial arrangements designed to support and supplement business enterprise activities. While present, income-generating activities based on financial investments and property-based transactions played only a minor role in all four projects visited. It is worth noting, however, that where they did exist, these activities were expressly designated to meet project costs. This was not the case with business enterprise activities, which were often seen more as a direct conservation tool to mitigate threats from surrounding communities than as financial arrangements with the potential to generate funds to meet project objectives in the long term.

Lessons Learned

From the portfolio review, the analysis of the project sample, and the case studies, the following main lessons have been learned:

- ***Selection of financial arrangements.*** The selection of financial arrangements has generally been done with inadequate information. Some of the background information needed to make decisions was not obtained or was sought too late in the project implementation process.

- ***Business planning.*** Many of the projects reviewed did not prepare business plans, or similar documents, as part of the process of developing their long-term financial solutions. Consequently, there was no simple way to assess whether or not the financial arrangements were likely to perform their intended roles and meet their projected targets.

- ***Time frame and timing.*** In the projects reviewed, the time frames for accomplishing project objectives were seriously underestimated. Design and implementation activities must be started earlier and longer time frames are needed to ensure that the financial arrangements adopted can begin to generate the income needed to ensure projects' financial sustainability.

- ***Linkages with national and local contexts.*** Depending on the nature of the project, adequate linkages have been established with national and/or local-level actors. Many of the financial arrangements aimed at mitigating threats from local communities were well developed.

- ***Capacity building.*** Many of the financial sustainability activities included in the projects had capacity building components. The linkages between those components and the actual development of revenue-generating activities could be strengthened with more direct interventions from the project in the form of grants, debts, or equity investments.

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[1] The four projects are **Nepal**: Conservation of Endangered Tiger and Rhinoceros; **Côte d'Ivoire**: Community-Based Natural Resources and Wildlife Management; **Costa Rica**: Conservation in the Talamanca-Caribbean Biological Corridor; and **Romania**: Biodiversity Conservation Management.

- ***Management of risks through portfolio diversification.*** The financial sustainability solutions adopted by many of the projects tended to be based on single or a few similar revenue-generating activities. This lack of diversification made it difficult for projects to manage risk, exacerbating the financial instability with changes in global economy trends, political climate, and other external factors.

Checklist for the Design and Implementation of a Financial Arrangement to Support a GEF Biodiversity Project

The following checklist of activities and tasks is provided to assist proponents in the design and preparation of future GEF projects. Of course, not every item is applicable in every situation or biodiversity project. The checklist is proposed as a guide and does not pretend to be exhaustive or comprehensive. Further explanation of terms is included in the body of the document and in the annexes. Consideration of other issues relevant to particular sites, conditions, and circumstances may be required.

(1) Selection of a financial arrangement

- Conduct a thorough review of options of revenue-generating activities.

- Prepare an analysis of the project constraints (available funding and project duration) and the policy context.

- Explore those financial arrangements that have worked in the past. There is no need to pay a premium for innovation when the objective is financial sustainability to support the project outcomes.

(2) Business planning and design considerations

- Develop a business plan that includes at least the following components: (a) a market analysis that explores the industry, the potential customers and investors, the competitors, and the expected size of the market; (b) well-supported financial projections with cash flow forecasts and a solid understanding of the break-even conditions; (c) a realistic assessment of the funding needs and the time required to generate a surplus; and (d) the profile and terms of reference for the management team.

- Ensure that the business plan looks at the project in a comprehensive way, seeking measures to reduce costs and increase management effectiveness, as well as increase the funding flows.

- Make sure that the financial arrangement selected fits within the existing policy and legal framework. If reforms are needed, they should be accomplished before proceeding with the implementation of the financial arrangement because of the inherent unpredictability of accomplishing policy and legal reforms, large or small.

- Obtain sufficient funding, from the project or other sources, to develop the business plan during project design. Once the project is underway, it may be too late to start planning for financial sustainability. This may be particularly important for medium-size projects.

- Put together a qualified team to develop a sustainable finance solution that meets the need and fits within the context of the project.

- Design and put in place adequate monitoring and evaluation procedures to assess the performance of the sustainable finance solution adopted.

(3) Linkage with the national and focal context

- During the selection of the financial arrangement, pay careful attention to existing opportunities at national and local levels. Particular attention should be paid to established markets, business incentives, and available human resources.

- During project design, thoroughly research the policy framework constraints and identify actions to mitigate them.

- Undertake a public outreach and communication strategy to engage all the stakeholders.

(4) Institutional and human resource development

- Include the necessary capacity building activities as part of the project to reduce its chances of failure.
- Include in the business plan the design and support of an adequate institutional framework (transparent, multi-stakeholder) to manage the collection, transfer, and re-investment of payments from charge systems.

(5) Contingency planning and portfolio diversification

- Approach the financial sustainability of each project from a portfolio perspective, where any instability in funding flows can be managed by diversifying the types of financial arrangements and by involving a wide range of stakeholders.
- If appropriate, do an environmental impact assessment to ensure that the impact of the financial arrangement on the biodiversity it seeks to protect is minimal and/or can be managed with adequate mitigation measures.

1. Context and Scope of Study

This document consists of three parts. The first presents the context and scope of the study. It defines the concept of financial arrangement used and presents a list of the outputs. The second part presents a conceptual framework for developing a comprehensive sustainable finance solution for biodiversity projects. This framework was used in the background to conduct the study. The third section presents the main findings of the study, including the portfolio review, an in-depth look at a sample of 18 projects selected by the IAs, and an integrated analysis of four case studies. More details and specific information is presented in the annexes and appendices, which are included in the attached CD-ROM.

Context

This study was prepared as part of the Global Environment Facility Monitoring and Evaluation (GEFM&E) work program for 2002. It was coordinated by GEFM&E and carried out by a team (Study Team) consisting of representatives of the GEF Secretariat, representatives of the three GEF IAs, and the technical team of the Wildlife Conservation Society Conservation Finance Program (the consultants). An Advisory Committee was also formed with representatives from Conservation International (CI), The Nature Conservancy (TNC), World Wildlife Fund (WWF), and Brazil's Biodiversity Fund (FUNBIO), a GEF-supported fund.

The rationale for the study emerged from the findings and conclusions of several earlier evaluations, which suggested that biodiversity initiatives supported by the GEF needed to become financially self-sufficient after completing the GEF-funded phase. Although GEF projects have been successful in using trust funds to secure reliable, long-term funding, there are many other examples and experiences of financial arrangements currently under implementation that could offer other options for project proponents throughout the world. The GEF, as an institution, needs to assess, highlight, and learn from these experiences.

Objectives and Outputs

Financial arrangements have been used generally to address two related issues surrounding biodiversity conservation: (1) the need to meet the costs of the conservation project itself, and (2) the desire to share the economic benefits that effective biodiversity conservation can bring to communities and society in general. Because of the amplitude of the topic, the scope of the study was limited from the outset to the first issue: financial arrangements to support the projects' objectives. The all-important question of sharing the benefits derived from biodiversity, its conservation, and its sustainable use was not addressed in any detail during this study. An in-depth review of environmental funds also was excluded, given that this topic was explored in a separate study in 1999.[2]

Recognizing that many studies have been completed on the broader issues of environmental financing and economics, this exercise builds upon these documented and verified experiences. To avoid duplication, the focus of this study is on the current GEF biodiversity portfolio of projects.

The objectives of this study were:

- To identify sustainable finance options for the conservation and use of biodiversity

[2] *GEF Evaluation of Experience with Conservation Trust Funds (1999)*; GEF website.

- To assess the use of financial arrangements in GEF projects

- To review the most relevant financial arrangements for GEF projects in the context of project design and implementation

- To synthesize the main lessons learned and provide guidelines for project proponents and recommendations for the GEF.

The outputs of the study are:

- ***Literature review.*** The most important publications on the main financial arrangements used in biodiversity conservation were reviewed and presented. Descriptions of the most relevant mechanisms were included along with an extensive bibliography.

- ***General biodiversity portfolio review.*** A review of the consolidated GEF biodiversity portfolio data, which included 212 full-size and medium-size projects under implementation as of June 2001, was conducted and used to detect general trends and types and financial arrangements being used by project proponents.

- ***Project sample review.*** Eighteen projects selected by the IAs were analyzed in greater detail. This review focused on three main aspects: (a) the early assessment activities, which include, among others, the process by which the financial arrangements were selected and their feasibility evaluated; (b) the design process, studies, and activities undertaken to structure the operation, such as the preparation of a business plan; and (c) the implementation arrangements including, but not limited to, schedules, budgets, and, most importantly, staffing.

- ***Case studies and cross-case analysis.*** Four projects out of the sample of 18 described above were selected for field visits and a more thorough analysis. The IAs chose these projects for best practices of their financial arrangements. The goal of the analysis was to understand the way in which the financial arrangements were selected, designed, and implemented, and to assess their success in providing sustainable funding to achieve the project outcomes.

- ***Database.*** A database was designed and constructed in Microsoft Access. It is composed of seven relational tables. The two primary data tables—a GEF Project Data Table and a Financial Arrangement Table—are linked through the type of financial arrangement identified in the GEF project. Four other information tables on each of the financial arrangements identified in the study (financial investments; business enterprise; property-based transactions; and other sources of income). Finally, the database contains a Bibliographic Reference Table with the full bibliographic citations for financial arrangements and income-generating activities.

- ***Communication and dissemination strategy.*** To make the most effective use of the information available on the financial arrangements being used by the GEF, a communication and dissemination strategy was developed. The strategy identifies the different outputs of the study along with the target audience and suggests ways of delivering this information.

- PowerPoint ***presentation*** with the findings of the study.

- ***CD-ROM*** with all the information and reports produced.

Challenges

Even with a narrow focus, a study of this nature faces important challenges; among them are the early stages of development of the projects selected for the case studies and the limited availability of information.

Implementation stage of reviewed projects. The adoption of arrangements other than environmental funds to secure the financial sustainability of GEF-supported biodiversity projects is relatively recent. This may be one of the reasons that the projects selected by the IAs for case studies were still in the very early stages of implementation. Although visits to four of these projects provided much information about how financial sustainability options were assessed during project preparation and how the selected financial arrangement was designed, information about actual performance is not yet available.

Information availability. The information available on the financial arrangements was insufficient to complete an in-depth portfolio review. In those cases where financial sustainability arrangements were addressed in project document annexes, the information was very general.

2. Developing a Comprehensive Sustainable Finance Solution

Before the review could begin, it was decided that a conceptual framework was needed to be used as background for the study. The framework that was developed is further described in Annex 1 and summarized below.

To put in place a successful financial solution, a project development team must address some basic questions:

a. Where will the funds needed to start and/or support the project as a whole (not just the financial sustainability component) come from?

b. What method will be used to transfer project funds to support specific financial arrangements?

c. What type of financial arrangement will be adopted?

d. What specific activity will generate the income needed to meet the project goals?

Sources of Funding for Biodiversity Conservation[3]

A wide range of grants and transfers from private philanthropic organizations and individual donors,[4] bilateral and multilateral development agencies,[5] and government programs[6] has traditionally supported biodiversity conservation. At different times, public and private sources of concessional funding have dominated, depending on (1) the political climate and economic conditions of the host countries, and (2) the availability of funding and concern for biodiversity conservation by the international community. Because of the inherent, and demonstrated, unpredictability of these two factors, project managers[7] have sought to use these traditional sources of funding to develop a larger and more stable funding base to support their project activities.

For the purpose of this study, three primary sources of funding for biodiversity projects have been identified:

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[3] Examples, references, and more details about each funding source and revenue-generating activity mentioned in this report is provided in the Literature Review (Annex 2).

[4] Grants from institutional and individual donors have been made directly to the projects themselves or, more commonly in the case of international sources, through local or international non-government organizations.

[5] In addition to non-reimbursable contributions, such as grants and technical assistance, development agencies have also provided loans in market and concessional terms.

[6] Government programs come in a wide variety of forms, among them budget allocations, fees, and special transfers for funding specific activities. These government funds are typically used as matching funds for other sources of funding, primarily from bilateral and multilateral agencies.

[7] Project managers as referred to here are any individual or group of individuals responsible for implementing biodiversity projects, whether they operate in the public, private, non-government, community, or academic sectors of society.

(1) public funding, (2) fundraising, and (3) revenue-generating financial arrangements (the focus of this study).[8]

Public funding. The most obvious sources of public funding to support a national or sub-national protected area system, or parts of this system, are *budget allocations* by national and sub-national governments. *Taxes, royalties, and fees,* where appropriate and allowed by law, are another source of funding that can target specific sectors and user groups. Additionally, government can provide *grants* for specific activities, programs, or target groups involved in biodiversity conservation and sustainable management.

Fundraising. There area number of sources that provide funding accessible through fundraising efforts. *Bilateral and multilateral agencies* have traditionally provided significant support for biodiversity conservation and sustainable management as have individuals, corporations, and philanthropic organizations. The way in which each of the sources can be accessed differ widely, depending on the source of their funds, their giving program, and their institutional nature. Additionally, there are a number of *other sources* that could be used to enhance the revenue-generating capacity of projects, among them merchandising, debt-for-nature swaps, and lotteries.

Revenue-generating financial arrangements. From an operational perspective, three types of financial arrangements—business enterprises, financial investments, and property-based transactions—share some common. **These are the focus of the study.** The three types are defined and described below, and again in more detail in Annex 1 (Conceptual Framework).

An Operational Definition of a Financial Arrangement

The concept of a financial arrangement is as intuitively obvious as it is hard to define precisely. The literature provides a full range of classifications for different types of financial arrangements. However, these reflect a wide range of perspectives and have been constructed to meet very different sets of objectives. For instance, those interested in understanding the funding sources adopt classifications that highlight the origin of the funds (e.g., private vs. public) and those interested in the business opportunities focus instead on the sector where investments can be made and revenues earned (e.g., tourism, agro-industry). *For the purpose of this study, the definition adopted for financial arrangement is an operational one that allows project proponents, reviewers, and managers to devise biodiversity projects with well-selected and designed financial solutions that meet realistic implementation targets:*

> Financial arrangements are a means of generating revenues or securing income that are supported by the project through grants, debt, and/or equity investments for the purpose of providing funding to support—directly or indirectly—project outcomes.

Using this definition, the study organized **the revenue-generating activities** in GEF-supported projects in three broad categories, as defined in Annex 1 (Conceptual Framework) and summarized here:

- ***Business enterprises.*** All types of businesses are included under this category. Among the most common are entrance fees, lodging, tour guide and food services, sustainable agriculture, merchandising and retail, ecosystem services, and others. These businesses can, and often are, owned and operated by communities, private sector companies of different sizes, and public sector corporations. What they all have in common is that they generally seek (1) to create wealth for investors and entrepreneurs; (2) to transfer revenues to meet direct costs of project management; or (3) to combine these two options. In the first case, project benefits are more likely to be expressed in terms of reduced pressure on the biodiversity resources the project is trying to protect or an enhanced, non-destructive use by communities, businesses, or specific government corporations. In the second case, the revenues return to the project to meet operational and programmatic objectives.

[8] These categories are not discrete and overlap a great deal. As mentioned before, any classification of funding methods is imperfect and may generate a great deal of debate. The main criteria used in this study is purely operational, taking into account the types of skills, capacities, products, and activities that a project manager must develop and undertake to obtain income and revenue from each of these sources.

- ***Financial investments.*** For the purposes of this study, any type of arrangement that involves the investment of assets in a wide range of financial instruments is categorized as a financial investment. This financial arrangement includes, among others, three types of fund-based transactions. The first two, endowments and sinking funds, typically invest their capital in stocks and bonds, often in an OECD country, and sometimes in emerging capital markets. The purpose of these investments is to generate a stable flow of income from earned dividends to support project activities. Where endowments and sinking funds differ is in the provision for invasion of principal. Endowments typically have very strict rules preventing invasion of principal and limiting the funds available for project support to the dividends generated by the investments. Sinking funds, on the other hand, by design, aim to deplete the principal in an established period by spending accrued dividends plus a portion of the principal. Revolving funds, the third type of fund-based transaction, are used to transfer funds to communities, organizations, businesses, and individuals on condition of repayment. The terms of the repayment can differ greatly, from heavily subsidized, in which case the revolving fund would behave like a sinking fund or even a grants facility, to providing loans on market terms, in which case a revolving fund could be a net generator of revenues for project activities. These revolving funds can act through the banking sectors in more formal ways, targeting larger companies and those with the right type of collateral (a limiting factor in the case of many developing countries) or through specialized institutions and NGOs to provide micro-finance services to very small enterprises.

- ***Property-based transactions.*** Under the heading of property-based transactions, a wide range of deals were considered that depend on the ownership of real property (on land or water) and/or the resources they contain. The type of property-based transaction that can be done in any particular country and context depends on the local legislation, which varies widely from country to country. For this reason, and because of the fact that land ownership has a strong and complex social dimension, property-based transactions tend to be the most difficult financial arrangements to put in place. Hence, it is not surprising that there are few, if any, projects in the GEF portfolio that use property-based deals as a source of revenue. As complex as these transactions are, there are a number of property-based deals that biodiversity projects could include in their sustainable financing strategies. Among them are easements and concessions, as well as traditional real estate transactions. Because easements and concessions represent a lower cost alternative to an outright purchase of land for conservation, they have been used and promoted as a conservation tool, rather than as a purely financial tool. Real estate transactions represent a relatively untapped source of revenue for biodiversity conservation projects. The benefits of these types of transactions range widely, from building a relatively stable asset base to establishing revenue-generating activities through rental agreements.

As noted, these financial arrangement categories have been defined purely in operational terms. There is some overlap between them, but in general, these categories bring together instruments or transactions that work based on similar design and implementation requirements. For example, those developing a business, regardless of the type of business, would have to develop a business plan that deals with production and sale of a given set of goods and services. Most of the effort in setting up a fund, on the other hand, is spent designing the instrument, selecting the investment manager, and overseeing the invested assets. And in a property-based transaction, project proponents have to address issues of property rights in general.

Advantages and Disadvantages of Different Financial Arrangements

There are many ways in which financial arrangements and combinations of financial arrangements can meet the long-term funding needs of biodiversity conservation projects. It largely depends on the nature and the funding needs of the project. There are, however, certain circumstances when a given arrangement may work better than others (for more information, see Annex 1, Conceptual Framework). To meet recurrent expenditures, for instance, financial investments such as endowments and other types of funds may be an adequate solution. However, this

type of financial arrangement demands a high cash input from donor agencies, such as the GEF, that may make it prohibitive for some projects. These considerations—the type of cash flow that could be generated contrasted with the effort to capitalize a fund—need to be combined with others, such as the risk profile of the financial investments, the cost of design and implementation, and the policy and regulatory framework of the country where it would be put in place. Similar considerations must be made for the other types of financial arrangements considered in this study. Business enterprises, for instance, may yield a higher rate of return, but the risk and transaction costs may make it less desirable than property-based transactions, which tend to be less risky but yield lower rates of return and are less liquid.

Success Factors of Different Financial Arrangements

In addition to the characteristics and internal performance factors of each of the financial arrangements discussed, there are a number of external factors that affect them differently and must be taken into consideration when a sustainable finance solution is developed for a particular project. For example, financial investments, particularly if the assets are invested in overseas markets, tend to be very sensitive to currency convertibility and capital transfer regulations. Property-based transactions are dependent on clear property rights and land tenure legislation. Without them, they are not a viable option. Annex 1 contains a summary of the factors that must be taken into account in the design of a sustainable finance solution.

3. Financial Arrangements in GEF Biodiversity Projects

General Biodiversity Portfolio Review

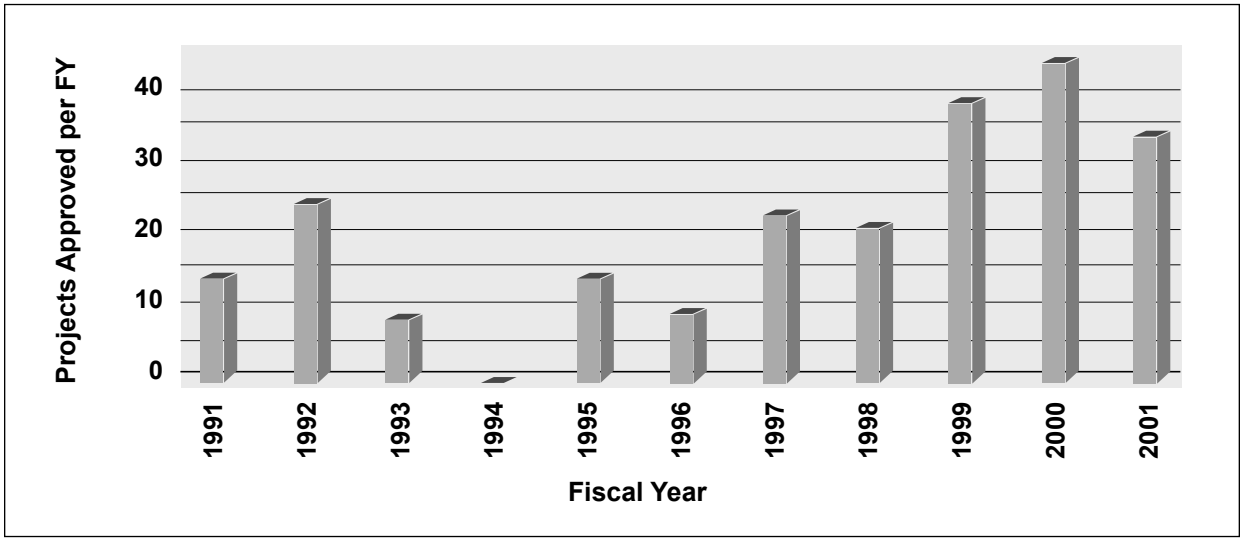
The GEF's biodiversity program was initiated in 1991; as of June 2001, 240 projects have been approved (Figure 1). Of those, 212 medium and full-size projects were the focus of this portfolio review.[9] Of this sample, only about a fifth of the projects have been completed. Given the relative youth of the GEF portfolio, the observations made during this study are largely based on projects at different stages of development, many of them in the early phases.

The purpose of the portfolio review was to draw lessons learned from projects already designed and under implementation. The information used was that available in the GEF database as well as project documents provided by the IAs. The portfolio review consists of two levels of analysis:

a. A general overview of the portfolio, including length of implementation of projects; the portfolio breakdown by regions of the world, IAs, and medium-size versus full-size projects; and types of financial arrangements and activities.

A desk review of 18 projects selected for their best practices. The IAs chose these projects based on some general guidelines provided by the consultants, who were seeking representation of the portfolio at the regional level. The desk review focused on project documents, project implementation reviews, mid-term reviews, and other relevant documents when available.

Figure 1. Number of Projects Approved Per Year



[9] The portfolio review excludes Small Grants Program projects and enabling activities because they are not required to provide financial sustainability after project implementation. It also excludes projects approved in fiscal year 2001 because most were not under implementation at the time of the review. Also, it is important to note that it is possible that some of the financial arrangements being applied in some projects may not have been adequately identified. This is due to the fact that many of the project documents do not explicitly identify them or may not have labeled them precisely.

Figure 2. Type of Financial Arrangements Used in Entire Portfolio[12]

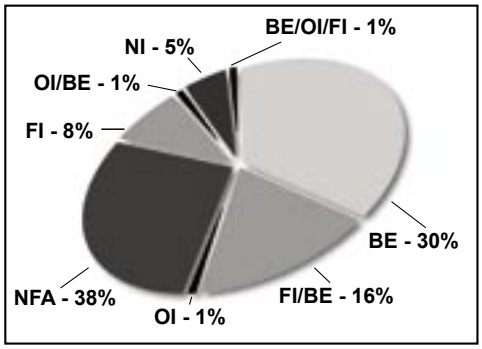
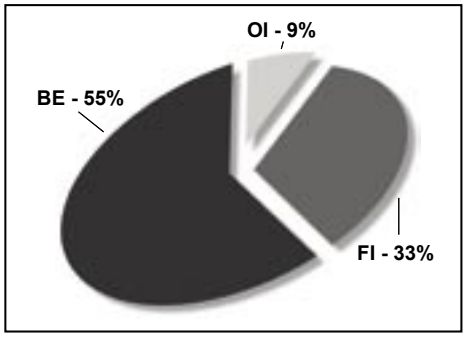


Figure 3. Financial Arrangements Used among Projects with at Least One Financial Arrangement



One of the criteria for approval of biodiversity projects is to address financial sustainability of the project outcomes beyond GEF funding.[10] In this context, the portfolio review looked into the financial arrangements used in full-size and medium-size projects approved by the GEF from fiscal year 1991-2000. Roughly four in 10 projects reviewed either did not include financial arrangements or had no financial arrangement listed in the GEF database (Figure 2); the rest included at least one of the types of financial arrangements around which the study was organized (see Section 0 or, for more details, see Annex 1 (Conceptual Framework). More than half of those with financial arrangements include business enterprises as their option of choice (Figure 3),[11] often alone and sometimes combined with other types of financial arrangements. In fact, close to seven in 10 projects relied on a single type of financial arrangement, while the rest had developed a long-term funding solution based on two or more types (Figure 2). One of the financial arrangements identified in this study—property-based transactions—was not adopted in any of the current GEF biodiversity portfolio projects.

The most common financial arrangement used in medium-size projects, by far, was the business enterprise, often aimed at supporting communities in their income-generating ventures. Medium-size projects with more than one financial arrangement were much less frequent. As expected, full-size projects showed a greater diversity in the combination of financial arrangements used, with the combination of business enterprises and financial investments being slightly more common (Figure 4). In very general terms, business enterprises alone or in combination with some type of financial arrangement (Table 1) seem to be more prevalent among full-size operations.

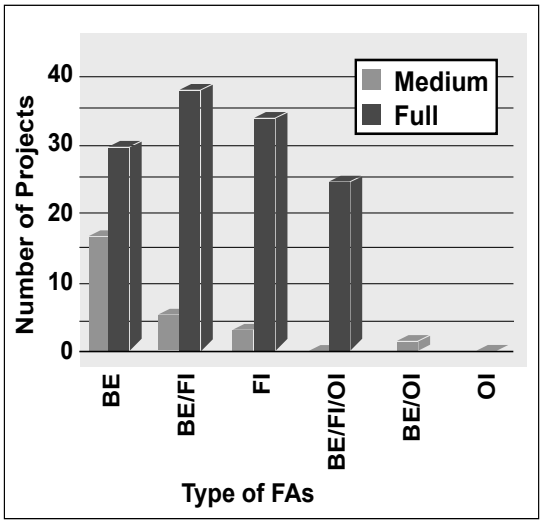
Although no statistical analysis was performed on the biodiversity portfolio data, Table 1 shows an interesting trend. Although the proportion of projects approved that included financial arrangements seemed to remain more or less constant every year (Figure 1 and Table 1), there appears to be a trend toward greater reliance on business solutions for the long-term funding needs of the projects. Likewise, there seems to be an increase in the type and combination of financial arrangements in the portfolio. Part of

[10] Chapter 1 of the GEF's Operational Strategy **(http://www.gefweb.org/public/opstrat/ch1.htm)** states that *"[t]he focus of GEF activities will concern long-term measures. Such measures, if they are to be part of a long-term solution, will have to be environmentally and socially sustainable, and not merely benign forms of current, but unsustainable, activities. Furthermore, the measures will need to be financially sustainable. Individual projects are financially sustainable if their design includes a means of ensuring a stable long-term source of funding for recurrent costs. Programs are financially sustainable if the initial GEF support reduces financial risk, overcomes transaction barriers, or builds markets to an extent that lowers future costs for measures of the same type."*

[11] The examples of business enterprises being incorporated into the GEF biodiversity portfolio ranges widely, from sustainable agriculture and forest, to tourism related activities such as lodging, food services, and merchandising.

[12] FI: financial investment. BE: Business enterprise. PT: Property-based transaction. OI: Other sources of income. NFA: Projects with no financial arrangements. NI: Projects that were not available for review and/or for which no FA was identified in the GEF database.

Figure 4. Project Size and Financial Arrangement Used



this may have to do with changes in the nature of the projects, for instance, shifting away from straight protected area management to a more integrated approach involving communities in and around critical biodiversity areas.

From the review of the projects in the GEF database, the following general patterns and trends can be observed:

Medium-sized projects tend to rely on single financial arrangements, as opposed to full-size projects, which feature more complex solutions to their long-term funding needs.

As would be expected, some of the more recent projects, namely the Komodo Collaborative Management Initiative (Indonesia) and the Asian Conservation Foundation (Philippines), have shown a great deal of innovation and sophistication in their design and promise to be quite successful in their implementation.

Although there seems to be a trend toward a greater diversification of the financial arrangements used in GEF-supported projects, there are still a number of options that have not yet been fully explored, such as property-based transactions, which may hold promise under certain conditions.

Some types of financial arrangements seemed to be almost omnipresent in many GEF-supported projects. For instance, among the business enterprises proposed, ecotourism-related activities (e.g., lodging, safari hunting, and guide services) were most commonly included among the financial sustainability measures planned during project design and adopted during project implementation. In some cases, this was done in spite of what appear to be very adverse condition for the development of this type of approach. One case in point is the West African Pilot Community-Based Natural Resources and Wildlife Management Project in Côte d'Ivoire, where ecotourism enterprises were to be promoted deep inland where transportation and infrastructure remain challenging, and the country's political situation is unstable.

The trends observed—the adoption of a business model as a long-term funding tool and the increased complexity and diversity of financial arrangements—may warrant a more thorough review of the portfolio. Most importantly, however, to fully understand the impact of the financial arrangements being put in place, it may be advisable to develop uniform

Table 1. Type of Financial Arrangement Chosen by Year

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
BE	4	3	3		2	1	6	7	13	9	10
BE/FI	1	5			3		4	2	7	5	3
FI	2	4					3			4	5
BE/FI/OI		2			1		1		1		
OI										1	1
FI/OI											
BE/OI										2	

protocols for their evaluation during project design and implementation, as well as at project completion.

Project Sample Review

Eighteen full-size and medium-size (see Annex 2) projects were selected by the IAs for a more detailed desk review. Of those, four were selected for site visits and the preparation of case studies. The desk review was done based on available documents. In some cases, the documentation was quite extensive (e.g., a project document, mid-term review, and additional documentation), while in others, it was rather limited. Because the portfolio is still relatively young, with many projects still under implementation, mid-term evaluations and project completion reports were generally not available.

The analysis of the projects selected focused on three main aspects. First, the projects were reviewed based on the early assessment activities, which include, among others, the process by which financial arrangements were selected and their feasibility evaluated. Second, the review looked at the actual design process, including the studies and activities that were undertaken to structure the financial arrangement, such as the preparation of a business plan. And, third, the implementation arrangements were reviewed, including, but not limited to schedules, budgets, and, most importantly, staffing. The main conclusions of the review follow:

- Because project documents typically do not include information about the analysis of options and feasibility assessments, it is difficult to evaluate the way in which this process was conducted and how decisions were made. In some cases, there are indications that this was done in a more or less systematic way, but in others the process was rather informal.

- From the information available, it appears that the decision for selection of one financial arrangement over another was done based on the experience of other projects and based on anecdotal information, as opposed to a more rigorous analysis of risks and opportunities.

- As was the case of the analysis of options and feasibility assessments, documentation about the design of the financial arrangement, including the business plans, financial projections, staffing needs, timetables, and budgets were not readily available. In some cases, it was apparent that those documents had been prepared and had been used in the implementation of the financial arrangements selected. In others, there was no indication that the design activities were conducted in any systematic way. Those documents are essential to evaluate the performance of the financial arrangements and their effectiveness at achieving their intended objectives.

- Many of the projects have well-developed capacity building components in the design and implementation of the selected financial arrangement. However, projects stop short of the investment in capacity building for the financial arrangements themselves.

- The skills needed to successfully implement many of the financial arrangements in those projects are very specialized. In the project documents and proposed implementation plans, however, there is relatively little mention of the specific staffing requirements to ensure that the financial arrangements are properly put in place and managed.

- Many of the financial arrangements put in place were aimed at managing threats to the biodiversity by surrounding communities and other users. With few notable exceptions,[13] most of those projects did not include the means to recover costs in order to support the project outcomes. It is difficult to fully assess the performance of the financial arrangement adopted because the project may not be generating a sufficient flow of funds to meet its own recurrent costs, but may be generating benefits to the surrounding community that make important contributions to accomplishing project goals. The opposite can also be the case, of course. To avoid this ambiguity, these issues need to be clearly articulated and appropriate performance benchmarks based on the intended results need to be put in place.

[13] For one such exception, see the Landscape-Scale Conservation of Endangered Tiger and Rhinoceros Populations in and around Chitwan National Park, Nepal.

- Often the design of the financial arrangements has been left for the project implementation phase. Although not enough information exists to evaluate the full impact of this approach, the following consequences are possible. First, the limited attention given to the financial arrangements used for purpose of sustainability during the project design phase may result in the selection of a less-than-optimal financial solution; second, the design and implementation of financial arrangements toward the end of the project life may allow little time to generate the financial returns that the project activities require to become self-sustaining.

Case Studies and Cross-Case Analysis

Four projects out of the overall sample of 18 were selected for field visits and a more in-depth analysis. These projects were chosen for their best practices by the IAs. Given that all of them were still under implementation at the time of the field visits, no conclusion can be reached regarding the long-term effectiveness of the financial arrangements being implemented. However, a great deal was learned about how financial arrangements are selected, designed, and being implemented. In some cases, it is possible to draw lessons from the early stages of implementation.

The field visits took place in May 2002, and staff of both GEF IAs and WCS-CFP prepared the case studies.[14]

The most frequent financial arrangement identified in the four case studies was business enterprises (Table 2), focusing both on the private and public sectors and on communities. This is not a surprising pattern given what was shown previously in Table 1. The examination of the project portfolio shows an increasing trend toward the adoption of business enterprises as a means to secure the long-term financial viability of projects as well as to mitigate some of the threats to the biodiversity projects aim to protect. Other types of financial arrangements were present in the projects, but formed a secondary tier of financial arrangements designed to support and supplement business enterprise activities.

Business Enterprise Activities

The business enterprise activities identified in the projects include small community-based enterprises, private investments in small and medium enterprises, and both community and private investments in ecotourism.[15]

- ***Strengths.*** During the design process, poverty in the communities surrounding the project area and unsustainable resource extraction practices are often identified as a major source of the threats to biodiversity, as it was in three out of the four case studies (Nepal, Côte d'Ivoire, and Costa Rica). Under those conditions, the development and promotion of alternative business activities can play several important roles. It can create alternative livelihood options for local communities and opportunities for local businesses while simultaneously reducing pressure on natural resources. Business enterprises can be a major catalyst of changes in behavior and attitude toward biodiversity, thus creating a more favorable environment for its protection as it can generate funds to support project outcomes in the long term.

  — **Changing behavior.** When business enterprise activities are included in a project, they can effect a significant behavioral change in favor of conservation. Not only can they generate long-term financial returns, but they can effectively become direct biodiversity conservation tools by diverting communities from other income-generating activities that threaten biodiversity. This is the case in the Baghmara Community Forest User Group project in Nepal, which demonstrates that projects can generate an income stream for local communities as well

[14] The field visits took place in May 2002, and the case studies were prepared by the following members of the WCS-CFP and IA teams: ***Nepal*** - Andrew Bovarnick (UNDP), Helena Olivas (WCS), and Valerie Hickey (WCS); **Côte D'Ivoire** - Ray Victurine (WCS) and Valerie Hickey (WCS); ***Costa Rica*** - Silvia Charpentier (WCS) and Helena Olivas (WCS); and ***Romania*** - Sam Wedderburn (World Bank) and Helena Olivas (WCS).

[15] Ecotourism, as used in this document, includes a suite of revenue-generating activities such as the collection of admission fees, and the provision of tour guides, food services, and lodging.

as funds for conservation. Although the income generated for the community does not meet all their needs, it is sufficient to create enough of an incentive for local communities to reduce their reliance on biodiversity resources (typically obtained unsustainably) and even, in some cases, to protect them.

— **Changing attitudes.** Supporting business enterprise activities can lead to significant changes in local attitudes towards conservation. As a result, the costs associated with traditional conservation activities, such as anti-poaching and monitoring, can be considerably lowered or shared. In Nepal, investments made in supporting and establishing community-based and conservation-based small enterprises led to the voluntary adoption of anti-poaching rules by the concerned communities. Thus local communities changed from facilitating (and in some cases directly perpetrating) poaching to actively working against it by performing regular patrols and ending their support to outside poachers. So even when the revenue generated by business enterprise activities does not directly feed into conservation activities, the attendant goodwill can often reduce costs, thereby producing the same end result.

— **Changing values.** Similarly, business enterprise activities that transform the value of wildlife can lead to cost-sharing arrangements with local communities that benefit both parties. In Côte d'Ivoire, wildlife previously viewed as a short-term asset in the form of bush meat suddenly became more valuable alive than dead with the introduction of ecotourism. Such tourism activities promise a long-term stream of income to local communities, but only as long as the local wildlife and wildlands provide an incentive for tourists to visit. Hence, local communities have an incentive to aid monitoring activities, rather than poachers. Although the project in Côte d'Ivoire has not been able to fully realize its potential for a number of reasons (many of them beyond the control of the project), the Costa Rica project shows concrete signs of this shift in the value assigned by the community to its biodiversity assets.

— **Direct project benefits.** Business enterprise activities can also be used to directly generate revenue streams to cover recurrent project costs. This situation is clearly illustrated by the Piatra Craiului National Park component of the Romania Biodiversity Conservation Management Project. This park has a large potential to capture revenues through business enterprise activities centered on the provision of certain services (including a visitor center, guided tours, and general admission) in return for a fee, which is collected and managed by the park management authority directly. In addition, these activities feed into a larger ecotourism theme that generates large income multiplier effects in local and regional economies due to the direct and indirect effects of hotel, food, transportation, and other tourism-linked expenses, resulting in local community support for conservation.

- ***Potential barriers.*** Providing business enterprises with the appropriate legal and regulatory framework at local and national levels has emerged as the major challenge for the GEF projects. There are two issues herein that merit attention: (i) fiscal and protected area regulations and (ii) natural resources and land property rights.

— **Fiscal and protected area regulations.** Despite the increased use of business enterprise activities to support conservation objectives, legal and policy frameworks often restrict optimizing this revenue generation. For example, attempts in Nepal by park management teams to develop business activities and collect revenue are hampered by national policies that have established protected areas as cost centers. As such, the central government demands that all revenues generated by protected areas, which are assumed insufficient to cover costs, be fed into the National Treasury. This significantly impairs the ability of park managers to control funding for recurrent costs at the park level, as there is no connection made at the national level between revenue-generating ability at the local level and investment from the central government. In all four projects analyzed, ecotourism activities have played an important role in the projects' financial sustainability plans. At the core of revenue generation through ecotourism is the protected area fee system, which was not considered during the design phase in any of the projects selected. In the Nepali case, the fee

system could become a major financial risk for the project. As already mentioned, fees cannot be earmarked for conservation and are in fact seen as national revenue to be used according to national priorities, thus reducing (if not eliminating) their value as a tool to sustain project outcomes.[16] In the Romanian project, because of legal restrictions that prohibit protected areas from having a two-tiered fee system, which keeps entrance fees low for in-country visitors and maximizes the revenue potential from overseas visitors, the protected area's revenue-generating potential is far from optimal.

— **Property and usufruct rights.** Revenue-generating activities based upon business enterprise arrangements require well-defined property rights if profits and income are to accrue to the capital and labor investors. However, in rural communities located in developing countries, weak land tenure and absent usufruct rights are prevalent. This removes the incentive for private investment in business enterprise activities because of the unstable access to the resources upon which future revenue generation is based. For example, the GEPRENAF project in Côte D'Ivoire, following the approach piloted in Burkina Faso, promotes contracts between communities and local establishments to organize trophy hunting in community biodiversity zones (ZBD). However, communities lack a sound legal title to these zones. Project funding, accordingly, has supported the survey, demarcation, and titling of these areas. While this is necessary, it has added significantly to project delays and expenditure. Similarly, in the Costa Rican Talamanca project, the Kekoldi Indigenous Reserve Development Association has found that sightseeing tours, which would promote the value of intact biodiversity, are obstructed by incomplete land titling processes.

Other Financial Arrangements

While present, income-generating activities based on financial investments and property-based transactions played only a minor role in all four projects visited. It is worth noting, however, that where they did exist, these activities were expressly designated to meet project costs. This was not the case with business enterprise activities, which were often seen more as a direct conservation tool to mitigate threats from surrounding communities than as financial arrangements with the potential to generate funds to meet project objectives in the long term.

In the Côte d'Ivoire and Nepali cases, financial investments were incorporated in the projects' design and implementation. In Côte d'Ivoire, for example, the project provided a loan guarantee to a local cooperative bank in order to put in place a micro-credit scheme that provided seed capital to local individuals to establish business enterprise activities. However, this program exhibited poor results due to the traditional banking approach taken, which required potential beneficiaries to have an existing bank account before a loan was approved, thus restricting loans to the wealthier members of local communities and creating community ill-will. The program also suffered because of the lack of loan repayment, generally due to the individual nature of the scheme and the subsequent lack of social controls often associated with a micro-credit program set up by and for the community as a whole. In addition, the project proposed an innovative property-based transaction based on leasing hunting permits for wildlife within community biodiversity zones.

In Nepal, the GEF project plans to support community-based savings and credit schemes to provide seed capital to invest in business enterprise activities. Such schemes are already in place from previous development projects, and the task is thus to earmark funds for conservation rather than reinvent the process. In addition, the project provides financial management training and seed capital for five funds that have endowments below US$50,000.

All four projects recognized the importance of continued fundraising to sustain project outcomes and the need for additional government financial allocations.

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[16] An exception is the case of the Royal Chitwan National Park itself, where 50 percent of entrance fees remain in local hands and are spent through the Buffer Zone Development Council (BZDC). However, even in this case, only 30 percent of this money is in turn earmarked directly for conservation.

Table 2. Summary Description of the Case Studies (Côte d'Ivoire and Burkina Faso and Romania)

	Côte d'Ivoire and Burkina Faso: West African Pilot Community-Based Natural Resources and Wildlife Management Project	**Romania: The Biodiversity and Conservation Management Project**
Implementing agency	World Bank	World Bank
Executing organization	Ministère de l'Environnement et du Cadre de Vie (in Côte d'Ivoire)	Directorate of Nature and Biodiversity Conservation (DNBC)
Total budget	US$13.19 million	US$8.8 million
GEF contribution	US$7 million (US$4.38 million for RCI)	US$5.5 million
Project duration	5 years plus 2-year extension	5 years
Start date	1997	1999
Project objectives	This project aims to conserve one of West Africa's most diverse and threatened ecosystems, the Comoé, by involving local communities in the sustainable and profitable use of wild resources and assisting them to manage their wildland areas for their own economic benefit and the benefit of biodiversity.	The objective of this project is the sustainable conservation of the biological diversity and ecological integrity of the Carpathian mountain ecosystems by strengthening the national frameworks for conservation, developing models for protected area and forest park management, and building public support for biodiversity conservation.
Financial arrangements identified	Community and private sector business enterprise projects backed by investments in enabling infrastructure	Public sector and community business enterprise projects complemented by supporting investments in forestry certification activities
Business enterprise	Ecotourism Entrance fees. The Association Inter-Villageoise (AIV) in Warigue plans to assess entrance fees for visitors to their Zone de Biodiversité (ZBD). Lodging. In Diefoula, the Association pour la Gestion des Resources Naturelles et de la Faune (AGEREF) is in the process of collaborating with a local tourism lodge to attract visitors to its ZBD. Guided tours. In Diefoula, the AGEREF has employed the services of a local ex-hunter to guide visitors and track elephants in their ZBD.	Ecotourism Entrance fees. The Park Management Authority (PMA) at Retezat National Park charges 10,000 Lei (US$0.30) for admittance to the Park. This fee has since been increased to 30,000 Lei (US$1) based on willingness-to-pay surveys. Lodging. The PMA collaborates with local hotels, inns, and private homes in order to house visitors to the parks and capture some income from each stay Recreational user fees. At Piatra Craiului National Park, visitors can engage in the following activities for a small user fee: camping (US$1); horseback riding (US$1.20); horse-drawn carts (US$1.10); guided tours (US$0.90); bike rentals (US$0.85).
	Trophy hunting The Cellule Autonome de Coordination (CAC) has conducted surveys to test the potential for safari hunting in both ZBDs, for which they would institute entrance fees, guide fees, and license fees for each trophy.	Eco-labeling This provides for higher priced markets for forest products derived from the local resource base.

	Côte d'Ivoire and Burkina Faso: West African Pilot Community-Based Natural Resources and Wildlife Management Project	Romania: The Biodiversity and Conservation Management Project
Business enterprise	NTFP Processing Both ZBDs contain a tree called vitellaria paradoxa, the nut (shea) of which, when processed, yields a valuable vegetable oil that can be harvested and sold both in its raw form, and with value-added processing to increase income.	Merchandising The PMA has initiated projects to produce and sell merchandise that publicizes the parks and captures revenue directly, including items such as t-shirts, postcards, and maps.
Financial investments	N/A	N/A
Property-based transactions	N/A	N/A

Table 2. Summary Description of the Case Studies (Nepal and Costa Rica)

	Nepal: Landscape-Scale Conservation of Endangered Tiger and Rhinoceros Populations in and around Chitwan National Park	Costa Rica: Conservation of Biodiversity in the Talamanca-Caribbean Biological Corridor
Implementing agency	UNDP	UNDP
Executing organization	King Mahendra Trust for Nature Conservation (KMTNC)	Asociación Corredor Biológico Talamanca Caribe (CBTC Association)
Total budget	US$1.728 million	US$1,269,930
GEF contribution	US$750,000	US$750,000
Project duration	3 years	3 years
Start date	2001	April 2000
Project objectives	The objective of this project is to enhance protection and conservation of viable populations of flagship species and their habitat through management of the Barandabhar Corridor, which is the only remaining forest patch connecting the Maharabat forest with Chitwan National Park.	The objective of this project is the conservation and sustainable use of the globally significant biodiversity of the Talamanca Caribbean Biological Corridor by protecting and managing the ecologically significant forest, marine, and freshwater ecosystems present in the corridor through development of a co-management model with local communities.
Financial arrangements identified	Community and private sector business enterprise projects complemented by financial investments (endowment funds and microcredit scheme)	Community business enterprise projects complemented by capacity building investments and financial investments to pay for environmental services

	Nepal: Landscape-Scale Conservation of Endangered Tiger and Rhinoceros Populations in and around Chitwan National Park	**Costa Rica: Conservation of Biodiversity in the Talamanca-Caribbean Biological Corridor**
Business enterprise	Ecotourism Entrance fees. KMTNC helps local communities set up the infrastructure to capture entrance fees to their community forests, and recycle that money back into forest management and conservation. Recreational user fees. Local communities, supported by KMTNC, charge small fees for the use of elephants, canoes, and guides for visitors to tour their forests.	Ecotourism Entrance fees. The Kekoldi Indigenous Reserve Development Association set up a green iguana reproduction center, where they breed the reptiles. They charge visitors US$2.00 for entry into the facility, which includes a guided tour. Lodging. The San Miguel Conservation and Development Association (ASACODE) runs an eco-lodge, CASACODE. The lodge is located 2.5km into the forest, and offers three meals, two snack services, and spacious rooms for guests at a price of US$41 per person per night.
Business enterprise	Conservation-based small enterprises The project is supporting small enterprise development for bee-keeping, vegetable growing, and mushroom farming, enabling local communities to capture revenue for forest management	Organic agriculture The Small Farmers Association of Talamanca (APPTA) has been organized to produce certified organic cacao and bananas. APPTA buys the products from its associates and sells them at a profit to local fruit processing plants.
Financial investments	Environmental funds Endowment Funds. The TRCP plans to establish five endowment funds to ensure the conservation and development of local communities, namely an anti-poaching fund (US$30,000), a health fund (US$5,000), a veterinary services fund (UD$6,000), and a fund educating females and disadvantaged children.	N/A
Property-based transactions	N/A	N/A

4. Lessons Learned

The lessons learned from reviewing the projects at the different levels as indicated above have been organized in the following categories to highlight their importance in the design of the financial arrangements for GEF and other biodiversity conservation projects: (1) selection of the financial arrangement; (2) business planning and design of the financial arrangement; (3) linkages within the national and local contexts where the project is to be implemented; (4) institutional framework and human resource capacities to manage the financial arrangements; and (5) contingency planning and portfolio diversification.

Arguably, the major weakness that emerged in the case studies has been the lack of a thorough and detailed assessment of the income-generating opportunities and analysis of the relevant financial arrangements. In fact, the design and implementation of a long-term financial solution tended to be largely reduced to duplicating already existing arrangements, and relying on ecotourism as the solution of choice (see Annex 4 for more details on the lessons learned from the sample project review).

(1) Selection of financial arrangement

The selection of the financial arrangement has generally been done without adequate information. Some of the background information needed to make those decisions was not obtained or was planned to be obtained too late in the project implementation process.

(2) Business planning and design considerations

Many of the projects reviewed did not prepare business plans (for a sample business plan outline, see Annex 11) or similar documents as part of the process of developing their long-term financial solutions. Consequently, there was no simple way to assess whether or not the financial arrangements were likely to perform their intended roles and meet their projected targets.

Although it is undeniable that financial analysis and planning during project design is a prerequisite to achieving financial sustainability, project documents show almost no analysis of the long-term financial sustainability of the revenue-generating activities selected. Business plans are the tool that provides reliable estimates of expenditures, recurrent costs, and potential revenues in both the short and long term. In an exercise carried out in Nepal, 10 activities were identified as integral to the project. Annual recurring costs could be roughly estimated for only eight, and five had no apparent or planned income beyond the project cycle.

In the projects studied, the time frames for accomplishing project objectives were seriously underestimated. In the projects visited, the two medium-size projects (Nepal and Costa Rica) were budgeted for a 3-year period, while the two full-size projects (Romania and Côte d'Ivoire) were similarly scheduled to end after a short period of time, in this case, after 5 years. For both, this time frame was insufficient. Indeed even at month nine, the Nepali project team realized the difficulties of establishing the necessary financial arrangements to secure the sustainability of the project, while the Côte d'Ivoire project, though extended 2 years, was still unable to guarantee a sustained revenue stream. Longer time frames are needed to design and implement the financial arrangements necessary to guarantee projects' financial sustainability. Projects need to allocate more time just for capacity building to

effectively implement the financial arrangements, build local support for the project, and provide real incentives for investment.

Financial arrangements need to be put in place as soon as possible once project implementation begins. Delays in implementation caused by identifying financial arrangements without adequately examining their relevance requires projects to re-think strategies, conduct important studies after the commencement of the project proper, and, in some cases, implement financial arrangements in an ad-hoc manner using trial-and-error processes which are lengthy and often unproductive. In the Côte d'Ivoire case, for example, the project is already in a period of extension, but its financial arrangements, most notably ecotourism, have yet to be fully designed, much less implemented.

Increasing the efficiency of the projects and keeping recurrent operational costs under control should be part of the business planning process. In the case of the Nepal project, one of the available options is to secure community participation (in-kind labor) in ongoing monitoring and enforcement activities in return for enterprise development support.

Like any business activity, once a financial arrangement is operational, it needs to be regularly monitored and managed to ensure that it achieves both its financial and ecological goals. This is particularly the case for tourism, where success can lead to negative environmental and social impacts. It was not obvious if any of the projects had monitoring and evaluation procedures in place.

(3) Linkages with national and local contexts

The importance of properly assessing the market potential for business enterprise activities cannot be overemphasized. Careful and detailed assessment of market potential and of project stakeholders' needs should be undertaken during the assessment of financial arrangements. Project staff need to understand their project's particular context, as well as local barriers and opportunities before identifying relevant financial arrangements. For example, the development of ecotourism, which is a cornerstone of the GEPRENAF project in Côte d'Ivoire, would not be advisable in an area that is largely inaccessible and in a country where most tourists go to the coastline for sun-and-sun tourism. The manager of a lodge in the adjacent Comoé National Park indicated that his lodge requires more than 4,000 tourists annually to break even; in 2001, less than 400 tourists stayed there. Similarly, even the revenue-generating potential of hunting permits is compromised by the official ban on hunting[17] and the scarcity of animals that would yield good trophies.

The often-limited support by national government policy for local conservation finance options can be due to the following reasons, as was the case of the Nepal project:

There are various ministries (Finance and Forests and Tourism) that influence conservation finance policy but do not share conservation goals. Thus the links between conservation and economic development are not clear and represented within the government policy-making structure.

The lack of knowledge about conservation's potential financial benefits is exacerbated by the lack of data on the linkage between conservation and economic development, particularly the willingness of tourists to pay to enter protected areas and the potential revenues that government could earn from strengthening protected area fee systems.

In a poor country such as Nepal, there are demands for financial resources (e.g., water supply, health, and education). Therefore there are many taxes already in place that can discourage a government from introducing an additional conservation charge.

Governments can be highly influenced by the private sector's strong lobbying forces, particularly in the tourism sector, which is interested in short to medium-term profit and thus would favor keeping tourism fees as low as possible (even if this threatens the future of natural assets).

The private sector is an important stakeholder in establishing and developing many financial

[17] Though the project team expects this ban to be lifted, both the timing and the possible restrictions that could emerge even were the ban lifted suggests little revenue-generating potential in the immediate future.

arrangements. The private tourism sector can be particularly reluctant to support increases in protected area user charges. In Nepal, the private sector has been a strong influence on government policy to maintain low protected area entrance fees. Its resistance is due in part to short-term profit objectives and fears of international competition. The private sector fears that user fees will increase costs to tourists, and thus reduce their interest in visiting the country. Taxes can also increase cost burdens on the private sector. The tourism sector needs to be consulted and convinced that it is in its interest to support conservation efforts and hence assist in generating finances for conservation.

(4) Institutional and human resource development

Promoting financial arrangements in general and business enterprise activities in particular requires a thorough assessment of local capacity prior to the financial arrangements' adoption. There are a number of conditions that must be met before any sustainable finance solution has a chance of succeeding. First among them are adequately trained professionals. Projects proponents need to recognize the skills that are necessary to assess and ultimately design and implement the financial arrangements. Where appropriate staff expertise is not available, projects need to form partnerships with NGOs, local government bodies, or the private sector to assist in implementation and provide the needed training to project staff and investors. This, for example, has been the case in the Talamanca project where, based on a training needs assessment, local organizations were given training in basic planning, management, accounting, leadership, and financial self-sufficiency.

Local capacity for communities to work together and manage funds is an essential part of many financial arrangements. Such local capacity building may take a long time, and the level of community organization should be assessed to determine how appropriate and possible it will be to manage and distribute conservation revenues at and through community-level organizations. It is the intricate and well-developed local institutional structures such as community user groups and the Buffer Zone Development Council (BZDC) that enable the effective distribution of tourism user fee revenues in Nepal. This degree of social cohesion has taken 30 years of the park's history to build. It is only with this base that such tourism revenues have been successfully dispersed and locally invested. Where such communal management is difficult to develop, community businesses likewise may be difficult to develop, and more entrepreneurial household business development should be stimulated.

(5) Contingency planning and portfolio diversification

Contingency financial plans are necessary to deal with adverse external events such as economic downturns, reduced demand for relevant products and services, and political instability, to name just a few. In general, projects should make a greater effort to include more exhaustive analysis of the risks associated with each identified financial arrangement. Activities related to ecotourism such as lodging, trophy hunting, the sale of handicrafts and locally produced souvenirs, all of which were prevalent in the projects reviewed, raise concerns about the vulnerability of the business enterprise strategy to global market conditions. This is well illustrated by the 50 percent decrease in tourists in Nepal in 2002 due to political instability. Significant revenue fluctuations such as this can seriously damage the projected sustainability of conservation objectives. Accordingly, greater consideration must be given to both diversification of financial arrangements as well as to revenue stabilization mechanisms.

5. Recommendations for GEF Projects

To reach financial sustainability in a general sense, conservation activities must contribute in some way to the national and local economies and continue to do so long after the project ends. For this to happen, projects must incorporate the following considerations into their design and implementation:

- **Mainstreaming conservation costs into government budgets.** The core costs of conservation must be mainstreamed into government expenditures, to the extent possible.

- **Developing a portfolio of financial arrangements.** Financial sustainability can only be effectively achieved through a suite of financial arrangements comprising both income-generating activities and other means of securing income.

- **Using financial arrangements as a threat-abatement** instrument. Financial arrangements can also be used as a programmatic tool to reduce pressure on critical areas and resources by creating alternative livelihood opportunities for local communities, directing them away from the use of the areas and resources the project wants to protect.

At the project level, proponents should take into account the following considerations: (1) selecting the appropriate financial arrangement; (2) developing a sound business plan as part of the design and implementation activities; (3) incorporating linkages with the national and local contexts where the project is to be implemented; (4) building the appropriate institutional framework and human resource capacities to manage the financial arrangements; and (5) undertaking contingency planning and portfolio diversification. A checklist of key issues to consider has been prepared and is included in Annex 7.

(1) Selection of financial arrangement

- The selection of the financial arrangement is one of the most critical steps in the design and implementation of a sustainable finance solution. A thorough review of the options, along with an analysis of the project constraints (available funding and project duration) and the policy context, must be done at the earliest possible stage to ensure that the financial arrangement selected can effectively contribute to meet the project objectives.

- Projects do not always need to develop new financial arrangements if they can build on existing ones. Projects should look to improving the effectiveness of existing local and national financial arrangements.

(2) Business planning and design considerations

- A well-developed business plan is the single most important determinant of success of a long-term financial sustainability solution (see Annex 11 for a sample outline of a business plan). It should have the following components: (1) a market analysis that explores the industry, the potential customers and investors, the competitors, and the expected size of the market; (2) well-supported financial projections with cash flow forecasts and a solid understanding of the break-even conditions; (3) a

realistic assessment of the funding needs and the time required to generate a surplus; and (4) the profile and terms of reference for the management team.

- The financial arrangement selected should fit within the existing policy and legal framework. If reforms are needed, they should be accomplished before proceeding with the implementation of the financial arrangement selected because of the inherent unpredictability of accomplishing policy and legal reforms, large or small.

- The effectiveness of the sustainable finance solution for a particular project involves much more than increasing the available funding. It also involves achieving cost reductions, increasing implementation efficiency, obtaining in-kind contributions and establishing cost-sharing mechanisms with government agencies, communities, and businesses.

- Sufficient funding should be obtained from the project or other sources to develop the business plan during the design of the project. Once the project gets underway, it could be too late to start the planning for financial sustainability.

- The project design team should include members with the right expertise in the development of sustainable finance solutions, who could lead the efforts to assess the options and produce a business plan that would meet project needs.

- Adequate monitoring and evaluation procedures should be put in place to assess the performance of the sustainable finance solution adopted.

(3) Linkage with the national and local context

- During the selection of the financial arrangement to be implemented, careful attention should be paid to existing opportunities at the national and local levels. Particular attention should be paid to the established markets, business incentives, and available human resources.

- During project design, policy framework constraints should be thoroughly researched and actions identified to mitigate them. At the same time, linkages with national and local development goals should be identified to position the project as a contributor to improving the quality of life in the project area and elsewhere.

- A balanced allocation of resources for working at national and local level is essential.

- During the design phase, a project should identify any changes to the enabling environment that are required prior to developing local financial arrangements. This could range from government policy on tourism development to protected area entrance fees to pollution taxes. Project preparation should consider the feasibility of changing the respective national policies and charging schemes and identify major activities required to achieve such reforms.

- In order to promote policy reform and development favorable for conservation, projects will often need to demonstrate the role biodiversity and ecosystems play in economic development.

- Each project financial arrangement should have a complementary public outreach and communication strategy to explain to the public and fee payers the role of the fee.

- Project brief sections for stakeholder participation should include a note on how these activities for financial arrangements will be organized.

(4) Institutional and human resource development

- Capacity building activities should be included as part of the project in general or as part of the financial arrangement component to strengthen the relevant institutions and build the capacity to implement the financial arrangements. The linkages between the capacity building activities and the goals of the financial arrangement should be clearly understood in order to target the accomplishment of the project objectives.

- Project designs should ensure the development of appropriate institutional structures (transparent, multi-stakeholder) to manage the collection, transfer, and re-investment of payments from charge systems.

(5) Contingency planning and portfolio diversification

- The financial sustainability of biodiversity projects requires a suite of financial arrangements to be considered and implemented, particularly under conditions where political, economic, and social risks are high. The diversification of funding sources is the single most effective way to mitigate those risks. However, diversification alone is not sufficient to ensure the financial stability of biodiversity projects. Project managers must establish mechanisms to continually adjust the business plan to reflect current conditions.
- Projects should include in the risk section of a project brief a plan to mitigate against negative external events that could affect proposed financial arrangements. There are environmental risks from negative environmental impacts that can occur as a result of business development. Tourism is a prime example of a business that can lead to environmental and social degradation if not properly managed. Preventing these risks requires coordination between stakeholders, supervision at a regional level, and managed relations with the private sector.