



for a living planet[®]

**A REVIEW OF INNOVATIVE INTERNATIONAL FINANCIAL MECHANISMS
FOR BIODIVERSITY CONSERVATION**

**WITH A SPECIAL FOCUS ON THE INTERNATIONAL FINANCING OF
DEVELOPING COUNTRIES' PROTECTED AREAS**

**P. Gutman and S. Davidson
WWF-MPO**

October 31, 2007

This report has been produced by the WWF-MPO program *Promoting Payments for Ecosystem Services and Sustainable Financing for Rural Conservation and Development*, thanks to the financial and technical support received from the German Federal Ministry of the Environment. In recent years the program has also received support from SIDA and other donors. Still, the findings, interpretations and conclusions expressed in this document do not necessarily reflect the views of these institutions

The authors are grateful to Axel Benemann for his support and advice throughout this work. We also acknowledge valuable comments to a previous version of this document received from Sarat Babu Gidda, David Huberman, Till Pistorius, Jorg Roos, Barry Spergel, and Surin Suksuwan.

Table of Content

Acronyms and Abbreviations	4
Introduction	5
1. The State of International Financing for Biodiversity Conservation	6
1.1. What is the Problem?	6
1.2. Why the Focus on International Financing of Protected Areas?	7
1.3. International Financing, Where are We?	8
1.4. Protected Areas Financing Gap	9
1.5. The Challenges Ahead	9
2. Existing and Innovative International Financial Mechanisms	11
2.1. Financial Mechanisms at Local, National and International Scale: Where are we and where could we go?	11
2.2. Focusing on International Financial Mechanisms	13
2.2.1. Government Sources. Traditional Financial Mechanisms	15
2.2.2. Government Sources. Innovative Financial Mechanisms	15
2.2.2.1. High-Income Countries' Budgetary Allocations Based in Specific Criteria	15
2.2.2.2. Environment-Related Taxes	17
2.2.2.3. Earmarking Non-Environment-Related Domestic Taxes	18
2.2.2.4. International Taxes	19
2.2.2.5. A Green Bond	19
2.2.2.6. Reforms to the International Monetary System	19
2.3. Voluntary Sources. Present and Future	20
2.3.1. Traditional financial Mechanisms	20
2.3.2. Innovative Financial Mechanisms	21
2.3.2.1. Green Lotteries	21
2.3.2.2. International Biodiversity Funds Based on Businesses and Private Contributions	22
2.3.2.3. New Goodwill Fund Raising Instruments	22
2.4. Markets and Businesses	23
2.4.1. Tourism and Biodiversity Conservation	23
2.4.2. Businesses Initiatives	26
2.4.3. Green Markets	27
2.5. International Payments for Ecosystem Services and Biodiversity Conservation	27
2.6. Summing up	31
3. Focusing on a Short List of International financial Mechanisms to Support Developing Countries' Protected Areas	32
3.1. Traditional Financial Mechanisms: There is Still Growth Potential in Them	32
3.2. Some Innovative Financial Mechanisms to Increase International Financing from Governments	34
3.2.1. Join-Implementation of Selected CBD Targets	34
3.2.2. Issuing Long-Term Green Bonds	35
3.2.3. Auctioning or Selling of Part of the Carbon Emission Permits and Other Cap-and-Trade Permits	36
3.3. Some Innovative Financial Mechanisms to Increase International Financing from Voluntary Sources	37
3.3.1. A Multinational Green Lottery	37
3.3.2. International Biodiversity Funds Based on Businesses and Private Contributions	39
3.4. Some Innovative Financial Mechanisms to Increase International Financing from Businesses and Markets	39
3.4.1. Foster International Markets for Regulated Bio-Carbon Offsets	40
3.4.2. Foster International Markets for Voluntary Bio-Carbon and Biodiversity Offsets	41
3.4.3. Foster International Green Markets	42

4. Innovative Financial Mechanisms. What Would it Take to Start Using Them?	44
4.1. Who Decides on Financial Mechanisms for Biodiversity Conservation?	44
4.2. Institutional Arrangements to Promote Innovative Financial Mechanisms	44
4.3. Improving the Supply of Biodiversity Conservation Programs	45
4.3.1. Better Conservation Can Attract More Funding	45
4.3.2. Integrate Biodiversity Conservation With Other Environmental and Development Goals	47
4.3.3. Improving Information and Education Among Major Stakeholders and the Public at Large	49
5. Conclusions and Recommendations	50
5.1. Conclusions	50
5.2. Recommendations	51
References	54
Annexes	
1. Innovative Financial Mechanisms Proposed in the Last Decade	58
2. What are PES and IPES?	65
Boxes	
1. The French International Solidarity Tax	18
2. Charity Lotteries. The Netherlands Experience	22
3. Namibia Conservancies Extraordinary Success and the Limitation of the Model	25
4. Green and Fair Markets. Figures and Cases	29
5. The GEF IPES Experience. Still in the Fringe of Conservation Finance	30
6. Mainstreaming BC into National Development Programs. South Africa's Working for Wetlands Program	48
Figures	
1. Number and Surface of Protected Areas	6
2. Trends in International Financing for Biodiversity Conservation	6
3. Biodiversity and Funds are Unequally Distributed	7
Tables	
1. Estimated Annual Investment in Protected Areas in Recent Years	9
2. A Summary of Traditional and Innovative Financial Mechanisms for Biodiversity Conservation	12
3. Government Sources. Traditional International Financial Mechanisms for Biodiversity Conservation,	15
4. Government Sources. Innovative International Financial Mechanisms for Biodiversity Conservation	16
5. Voluntary Sources. Traditional and Innovative International Financial Mechanisms for Biodiversity Conservation	21
6. Markets and Businesses. Traditional and Innovative International Financial Mechanisms for Biodiversity Conservation	24
7. International Payments for Ecosystem Services. Innovative Financial Mechanisms for Biodiversity Conservation	30
8. A Short List of Financial Mechanisms to Support Developing Countries' Protected Areas	33

Acronyms and Abbreviations

BC	Biodiversity Conservation
BIS	Bank of International Settlements

BZ	Buffer Zone
CBD	UN Convention on Biological Diversity
CBNRM	Community Based Natural Resource Management
CCC	UN Climate Change Convention
CDM	Clean Development Mechanism
COP	Conference of the Parties
CPOL	UN Convention on the Protection of the Ozone Layer
CTT	Currency Transaction Tax
DR	Drawing Rights
EU	European Union
FAO	Food and Agriculture Organization
FM	Financial Mechanism
GDP	Gross Domestic Product
GEF	Global Environment Facility
IBRD	International Bank for Reconstruction and Development (official name of the World Bank)
IMF	International Monetary Fund
IPES	International Payments for Ecosystem Services
IUCN	World Conservation Union
JI	Joint Implementation
LDC	Least Developed Countries
MA	Millennium Ecosystem Assessment
MEA	Multilateral Environmental Agreements
MDG	Millennium Development Goals
NGO	Non-Governmental Organization
OECD	Organization for Economic Cooperation and Development
OECD/DAC	Organization for Economic Cooperation and Development/ Development Assistance Committee
ODA	Official Development Assistance
PA	Protected Areas
PES	Payments for Ecosystem Services
PL	Productive Landscapes
PPP	Private Public Partnership
PRSP	Poverty Reduction Strategy Paper
SAPAF	South Africa Poverty Alleviation Fund
SDR	IMF Special Drawing Rights
SIDA	Swedish International Development Agency
SO	GEF's Strategic Objective
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
USD	US Dollar
WCMC	UNEP World Conservation Monitoring Center
WIDER	UN World Institute for Development Economic Research
WRI	World Resources Institute
WWF	Worldwide Fund for Nature, also known as World Wildlife Fund
WWF-MPO	WWF's Macroeconomics for Sustainable Development Program Office

Introduction

1. This report aims to contribute to the ongoing discussion about how to increase the flows of international funds for biodiversity conservation. This discussion has figured in the agenda of all major CBD forums since the Convention's inception in 1992.¹ The funding challenge has also been a concern of the conservation movement and has attracted the interest of the UN General Assembly, UN agencies, academics, and international financial institutions, which have focused both on how to finance biodiversity conservation and on the broader issue of how to finance the provision of global public goods.

2. This discussion will come to an important crossroads at the forthcoming Ninth Conference of the Parties to the CBD (COP9 of the CBD) to be held in Bonn, Germany next May 2008. The COP9 has on its agenda a review of innovative financial mechanisms and the consideration of a draft strategy for resource mobilization in support of the achievements of the objectives of the convention.² It is our hope that this report will help shape the initiatives that the COP9 will discuss and eventually endorse. To that end:

- Chapter 1 briefly discusses where we are and what the challenges are regarding international financing for biodiversity conservation;
- Chapter 2 briefly reviews traditional and innovative financial mechanisms available at local, national and international level and then focus on the international ones. Some 60 financial mechanisms are reviewed (and many more are listed in annex A)
- Chapter 3 highlights a group of 11 financial mechanisms that in the short term may have better chances of being picked up by the CBD parties, and of garnering support from governments, businesses and consumers;
- Chapter 4 addresses the question: What it would take to “make it happen” and proposes some building blocks for an action plan to move from discussion to actually increasing the flow of both existing and innovative international sources of financing for biodiversity conservation;
- Chapter 5 offers conclusions and recommendations. The latter are addressed to the forthcoming COP9;
- The annexes present more detailed information on several points of interest: (Annex 1 on various perspectives on innovative financial mechanisms; and Annex 2 discusses different approaches to what PES and IPES are or could become).

¹ See CBD 2007, and CBD 2006a, 2006b and 2005. 2006a has a good compilation of major provisions of the CBD and COPs regarding financing in general and innovative financing in particular.

² Following the directives of COP8 decision VIII/13.

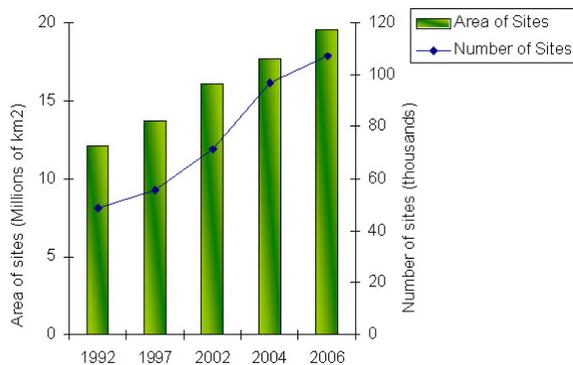
1. The State of International Financing for Biodiversity Conservation

1.1. What is the Problem?

3. Since its inception in 1992, the CBD has presided over a remarkable worldwide growth in biodiversity conservation (BC) efforts. Between 1992 and 2006, Protected Areas doubled in number and their total surface grew over 60% (see Figure 1 below). With the ambitious CBD “2010” target at hand, this rapid growth is bound to continue and attests to the world’s commitment to the CBD goals.

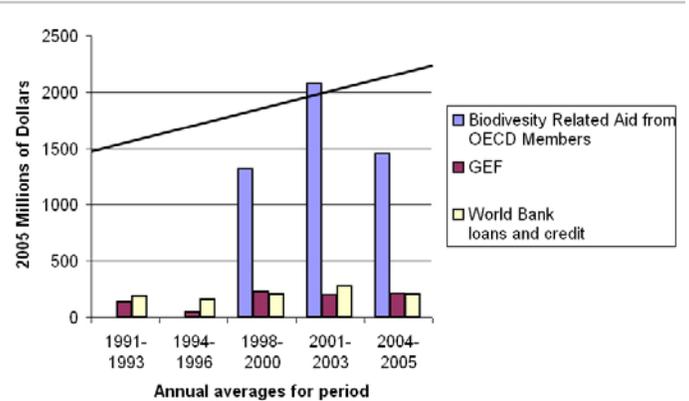
4. Unfortunately, this commitment to conservation has not gone hand in hand with a commensurable financial commitment, and funding for conservation, both national and international, has grown sluggishly. Figure 2 plots the financing for biodiversity provided in recent years by the GEF and the World Bank (both remain mostly flat), and the OECD countries’ biodiversity related bilateral aid (that goes up and down). Adding these three sources, a linear adjustment shows that together they grew approximately 38% throughout the CBD’s life.³ There is little information on the evolution of biodiversity financing from other national and international sources, but there is no reason to believe that they have performed better. In a nutshell, funds for biodiversity conservation, scarce to begin with, are lagging behind the conservation agenda in general and the achievements of the CBD goals in particular, and risk bringing them to a halt.

Figure 1. Number and Surface of Protected Areas^a



Source: Based in Chape et al, 2005 with additional information from UNEP WCMC and IUCN Protected Area Programme.

Figure 2. Trends in International Financing for Biodiversity Conservation^b



Source: See footnote 4

5. For sure, access to adequate funding is only one side of the coin. The other side is implementing effective and efficient conservation programs that make the most of available

³ Figures for GEF are annual averages of GEF grants for Biodiversity projects for each GEF replenishment period, based on figures from GEF online projects database (www.thegef.org) Figures for the World Bank are from World Bank 2006. Biodiversity-related aid from OECD members began way before 1998 but figures are only available from that date onwards (OECD 2007 and Paris 2006). All figures have been converted to 2005 USD using OECD, ODA deflators. The linear adjustment for the years 1998-2005 where we have information for the 3 sources is $y = 45.318x - 88628$.

funds. And although this document focuses on the former, it briefly discusses the latter (in Chapter 4), since improving the quality of the conservation offer is a critical ingredient of a successful strategy to attract the additional funding the conservation movement is looking for.

1.2. Why the Focus on International Financing of Protected Areas?

6. Today, international financing is the smaller part of global expenditure in biodiversity financing, with each country paying for most of its own BC costs. This is true for industrialized countries, and for most developing countries too, as soon as the opportunity costs (which in most cases are the largest costs incurred when establishing protected areas) are added to the direct costs.

7. The current situation is not only unbearable to many less developed countries that lack the resources to finance BC on their own, but it also contradicts the global character of biodiversity, its uneven distribution and the commitments of the parties to the CBD. Consider that:

- Biodiversity is not only of local or national importance; actually, a large part of biodiversity provides valuable ecosystem services to the world and thus its stewardship is also the responsibility of the international community (in the CBD terms, “a common concern of humankind”).
- The world’s biodiversity is unevenly distributed, with a large portion of it located in tropical areas of developing countries, which results in the current situation: wealthy countries with relatively little biodiversity to care for and poorer countries with a lot of biodiversity to care for (see Figure 3).
- The CBD and other MEAs endorse the tenet of “commonly but differentiated responsibilities,” meaning that BC financing should follow along this principle as well.

8. In a nutshell, both national and international financing are important for BC, but increasing international financing is critical to secure the conservation of global biodiversity. Likewise, BC encompasses several major strategies, but surely securing the viability of a representative world system of protected areas is at the core of them all.

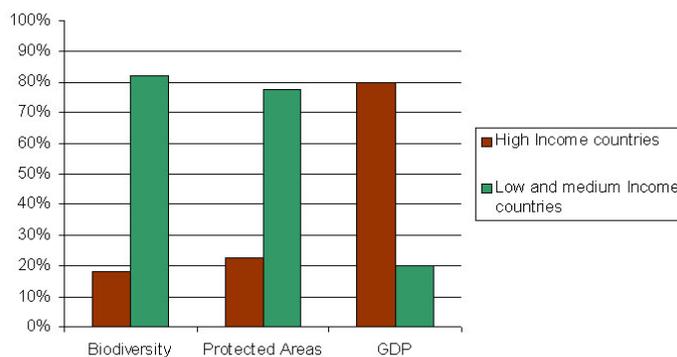


Figure 3 Biodiversity and Funds are Unequally Distributed

Source: Country groups and GDP from World Bank 2005. Protected Areas (size) from WRI 2003. Biodiversity based on Millennium Ecosystem Assessment 2005.

1.3. International Financing, Where are We?

9. Based on the available fragmentary information, in recent years international financing for all types of BC may currently be around 4 to 5 billion dollars⁴ (USD) a year (with some 30% to 50% of it going to finance PA).

- The largest amount—possibly as much as 2 billion dollars annually in recent years-- comes from high income countries' Overseas Development Assistance (ODA). Most of this is in the form of country-to-country bilateral aid, and the rest is in the form of multilateral aid managed by the GEF, other UN agencies, the International Development Agency and multilateral development banks (see Figure 2)⁵.

As mentioned before, official funding for global biodiversity conservation grew modestly through the CBD years. Since most of these funds are concessional and come from the general aid pot, biodiversity conservation has to compete with all other aid demands and there is a widespread belief in the conservation community that environmental issues have been losing ground vis-à-vis other international priorities. However, according to OECD/DAC figures, the share of biodiversity conservation has remained fairly constant, between 2.4% and 2.8% of total bilateral ODA through the last 15 years. So, changes in ODA for BC may have had more to do with overall fluctuations in ODA than with changes in BC's share of ODA.

- Not-for-profit funding, coming from international conservation NGOs, private foundations and businesses-related foundations, may contribute over 1 billion dollars annually to international biodiversity conservation but precise figures are difficult to estimate. On the one hand, the annual combined budget of just five international conservation organizations (WWF, IUCN, Conservation International, The Nature Conservancy and Wildlife Conservation Society) was over 2 billion dollars a year in recent years, and there are dozens of similar organizations. On the other hand, some of this money may not go to BC in developing countries, and there may be some double counting since some part of NGOs' budgets comes from ODA sources. As in the case of ODA, not-for-profit sources for biodiversity conservation have grown sluggishly during the last decade, as they depend in equal measure on people's awareness and on the state of the economy.
- Market-based sources include (a) international ecotourism and tourism, (b) markets for environment-friendly products (organic, certified, fair trade, etc) and (c) the incipient field of international payments for ecosystem services (IPES), like bio-prospecting and bio-carbon. This group of funding sources has grown quickly in the last two decades and hence has attracted high expectations. Still, with the exception of tourism and ecotourism, all other sources remain small and their current contribution to global biodiversity conservation is unknown. Putting together the scant information available (e.g. a few cases of bio-prospecting and IPES contracts in Latin America; reports that international ecotourism is already a major source of funding for National Parks and wildlife conservancies in South Africa, Namibia and other Southern African countries) this source could amount to between 1 to 2 billion dollars a year.

⁴ All figures of "dollars" are US Dollars (\$USD).

⁵ Figures for biodiversity-related foreign aid are difficult to estimate; beginning with the issue of deciding what does or does not qualify as biodiversity related investment. The only available figures are the OECD ones (OECD 2007 and Paris, 2006) and they are based on countries' reporting. Many in the conservation movement believe the OECD figure of 2 billion dollars a year of biodiversity related ODA to be a gross over estimation.

1.4. Protected Areas Financing Gap

10. Piecing together figures from different sources, the below table gives a crude estimate of global expenditures in protected areas in recent years, both national and international: between 6.5 and 10 billion dollars a year.⁶

Table 1. Estimated Annual Investment in Protected Areas in Recent Years (billions of USD)

A. All developing countries' investments	B. High income countries' aid to developing countries	C. High income countries' investments in their own countries	D. Total
1.3 to 2.6	1.2 to 2.5	4 to 5	6.5 to 10

Sources: A: Molnar et al 2004; B: our estimates; C and D: based in James et al 2001, Pearce 2005, 2007 and our estimates

11. How does this current funding compare with what would actually be needed? There are several different estimates of the funds needed for global biodiversity conservation, depending on the conservation target, and costs considered.

- Vreugdenhil (2003) proposes that an additional 1 billion dollars a year would significantly improve basic management in developing countries' existing protected areas. That represents a funding gap of between 9% and 13%.
- James et al (1999) estimated a 40% worldwide gap on the management cost of the PAs existing at that time. Using Table 1 above, that percentage would translate into a yearly financing gap of 4.3 to 6.6 billion dollars a year.
- According to Balmford et al (2002), a global protected area network encompassing 15% of the world's total land area and 30% of its ocean area, would cost some 45 billion dollars a year (over 30 years and including management costs and opportunity costs). Again using Table 1 above, this would represent a funding gap of 35 to 38.4 billion dollars a year or a percentage gap between 78% and 85%.

12. So what the available estimates tell us is that considering just protected areas' needs and funds, the world is currently investing around 30% of what would be needed to achieve the objectives of the CBD.⁷ While practitioners refine the figures, the CBD and the conservation community should consider the advantage of putting forward a fund raising target for global biodiversity conservation. A financial target would complement the 2010 conservation targets and would help orient and energize a resources mobilization strategy.

1.5. The Challenges Ahead

13. Where could additional sources of international BC funding come from? In the last 20

⁶ There is no way to make a similar estimate of the world expenditures in biodiversity conservation outside PA because of the difficulties in disentangling the biodiversity component, if any, in millions of rural investments decisions.

⁷ A fully comprehensive global conservation program, which would also include the sustainable management of agriculture, forestry, freshwater, coastal, and marine ecosystems is said to cost approximately \$300 billion a year (James et al. 1999). But one could assume that the largest part of these costs would be self-financed, through the sale of the sustainably produced goods and services.

years, a lot of attention has been given to the search of new or innovative international financial mechanisms to supplement the government, NGO and charity funds that have been the traditional source of international financing for all types of global commons, including global biodiversity. Proposals are numerous; some are of a general character, attempting to raise money from wherever available to pay for any and all global public goods, including global biodiversity. A smaller group consists of environmentally- or biodiversity-focused financial mechanisms, meaning that they would raise funds from environmental related activities, and/or would use the funds exclusively to pay for global environmental conservation. Among these environment-focused financial mechanisms, the conservation community has been particularly impressed by the financial innovations in the Kyoto Protocol to the CCC, and by the growth of markets and businesses for biodiversity and biodiversity related ecosystem services. Most of this document is devoted to a discussion of these and other traditional and innovative financial options.

14. Still, the discussion on how to increase international financing for conservation, either through traditional or innovative mechanisms, has been going on for a long time now; many good ideas have been suggested, yet little has ensued. The fact is that international funding encompasses many donors, many recipients and many institutional arrangements, and no financing innovation will happen until at least some of the key players commit to see them through.

Hence, any financing proposal should spell out to whom it is addressed and what are the minimum actions, institutional arrangements and commitments needed to jumpstart the process. In short, to move from a list of possible financing mechanisms to actual implementation, a resource mobilization strategy, actions and some champions are needed. These issues are briefly addressed in the last two chapters of this document.

2. Existing and Innovative Financial Mechanisms.

15. Funds for biodiversity conservation are growing slow or not growing at all; still, the number of existing or proposed financial mechanisms seems to keep growing fast (see Annex 1). One of the reasons for this financial mechanism “inflation” is simply the level of detail. For instance, government funding can be presented as one financial mechanism or can be divided into dozens of particular programs and financial windows, each one presented as a financial mechanism on its own.

16. Another reason for the financial mechanisms’ inflation is the lack of consensus on what qualifies as a financial mechanism. For example, many of the CBD discussions and documents lump under financial mechanisms three very different things: (a) mechanisms that would raise money for conservation (e.g. grants, government budget allocation, fees, green markets, PES etc.); (b) activities to raise awareness among would-be funders (e.g. communication, education, campaigns, etc); and, (c) ways to manage the funds once they have been secured (e.g. putting them into a conservation fund, paying for conservation concessions, etc). For this document, only mechanisms that falls under “a” are truly financial mechanisms and hence they are the subject of this review.⁸

2.1. Financial Mechanisms at Local, National and International Scale: Where are We, and Where Could We Go From Here?

17. Table 2 below presents a picture of both traditional and innovative financial mechanism available for biodiversity conservation at the local, national and international level. The list is quite aggregated, and as stated above it could be broken down into a larger and more detailed list of FMs, (and actually we do so in the next chapters to discuss international FM) but table 2 level of detail is enough to discuss the big picture of biodiversity financing.

18. Currently, the principal sources of financing for biodiversity conservation are (a) national and international public budgets; (b) national and international NGOs; (c) tourism; and, in the case of sustainable use of biodiversity in production landscapes (d) the emerging green markets.

19. And what could be the principal sources of financing for biodiversity conservation in the future? Some conservation stakeholders, frustrated with traditional financial sources’ failure to meet the world’s conservation needs, are calling for abandoning the “old” reliance on government and NGO funds, and embracing “new” market-based opportunities for BC financing. There is a considerable leap of faith in these calls, since no innovative FMs thus far have scaled-up to become a significant source of funding for BC. Furthermore, even if we are successful in developing and scaling-up new and innovative FMs in support of BC, this process is more likely to increase demands on traditional financing sources rather than marking their dismissal, given that:

- Governments are needed to develop and enforce the institutional and legal bases for many of these innovative financial instruments;

⁸ Still, increasing society’s awareness of BC, or improving the way conservation resources are managed, can boost stakeholders’ willingness to pay for BC and for that reason we discuss these issues in Chapter 4.

- In many innovative financial schemes, what is new is the rationale and the way of raising the funds, but still the funds would come from, or would be channeled through, governments or NGOs;
- Even the most private-driven, market-based financial mechanism may require government and NGO support, to pay for start-up costs, to help the poor and other disadvantaged groups to cope with and take advantage of new markets, and to ensure that the new financial mechanisms comply with social and equity standards;
- Last but not least, we should not equate traditional FM and traditional sources. Actually, traditional sources (governments, NGOs, tourism) can adopt many innovative FMs, some of which we discuss in this chapter.

Table 2. A Summary of Traditional and Innovative Financial Mechanisms for Biodiversity Conservation

Local Level Financial Mechanisms	
<p>More traditional</p> <ul style="list-style-type: none"> - Protected areas entrance and fees - Tourism related incomes - Local markets for sustainable rural products - Local NGO and charities - Local businesses good will investments 	<p>More innovative</p> <ul style="list-style-type: none"> - Local markets for all type of ecosystem services (PES)
National Level Financial Mechanisms	
<p>More traditional</p> <ul style="list-style-type: none"> - Government budgetary allocations - National tourism - National NGO fundraising and fund granting - National businesses good will investments 	<p>More innovative</p> <ul style="list-style-type: none"> - Earmarking public revenues - Environmental tax reform - Reforming rural production subsidies - National level PES - Green lotteries - New good will fundraising instruments (internet based, rounds, up, etc) - Businesses/public/NGO partnerships - Businesses voluntary standards - National green markets - National markets for all type of ecosystem services (PES)
International Level Financial Mechanisms	
<p>More traditional</p> <ul style="list-style-type: none"> - Bilateral aid - Multilateral aid - Debt-for Nature-Swaps - Development banks and agencies - GEF - International NGOs fundraising and fund granting - International foundations - International tourism - International businesses good will investments 	<p>More innovative</p> <ul style="list-style-type: none"> - Long term ODA commitments - Environment related taxes - Other international taxes - Reforms in the international monetary system - Green lotteries - New good will fundraising instruments (internet based, rounds, up, etc) - Businesses/public/NGO partnerships - Businesses voluntary standards - International green markets - International markets for all type of ecosystem services (PES)

20. The bottom line here is that innovative financing schemes for BC may add complete novelties to the conservation finance tool box; but, they will also call for re-defining, re-energizing, and expanding traditional financial schemes. So, an agenda of resource mobilization for BC should include both new financial mechanisms and new roles for traditional ones. In other words, it should look to both sides of Table 2. In this line,

- Among the traditional financial mechanisms at local and national level: government budget, visitors & tourism and NGOs, are important now, they will still be important in the future and have opportunities to grow and innovate
- Among innovative mechanisms at local and national levels: promoting payments for ecosystem services, markets for green products, new forms of charity, and businesses engagement in biodiversity conservation (e.g. PES, private/public partnerships, etc), all look promising
- Among innovative financial mechanisms only available at national level, environmental tax reforms and the reform of production subsidies can be very important in high and medium income countries, (but less so in less developed countries where the tax base is small)
- Among innovative financial mechanisms at the international level: long term ODA commitments, environmental taxes, green lotteries, promoting payments for ecosystem services and markets for green products all look promising, and we discuss them in more detail in the next chapters.

2.2. Focusing on International Financial Mechanisms.

21. To a large extent, difficulties to raise international funds to pay for the conservation of global biodiversity are similar to the difficulties faced by attempts to finance any type of global public goods (e.g. world governance, conflict resolution, world peace, fighting endemic diseases and world poverty, etc.).

The global in “global public goods” points to the fact that these goods are of interest to humankind, while their provision is beyond the borders of any single country (e.g., world peace, the conservation of tropical forests) or even beyond the borders of all countries (protection of the atmosphere, or the open seas). The public good in “global public goods” points to the fact that these are goods and services where markets do not perform well, hence a large portion of them must be provided and paid for through public arrangements (e.g. world governance, conflict resolution, protection of the stratospheric ozone layer, conservation of world biodiversity, etc).⁹

22. The last 20 years have seen multiple discussions regarding reforming international governance and international financial arrangements to better cope with the global commons. A large part of this debate has taken place within the United Nations General Assembly, UN agencies, and UN conferences, particularly the 1992 UN Conference on Financing for Development (UN 2001a and 2001b) and the 2004 UN General Assembly (Atkinson, 2005). It

⁹ In economics, a good or service is considered a pure public good if its consumption is non-rival and non-excludable, e.g. clean air (Samuelson, 1954). Institutionalism take a more broader and more social approach considering public goods, including any good or service that a majority of society would expect governments to provide to all or most of its citizens, in an affordable and equitable manner; from justice to public transport (Faust et al, 2001).

has also attracted the interest of academic circles, from economics to political science.¹⁰

23. A good deal of discussions on financing for the global commons have focused on finding innovative financial mechanisms to increase the amount of resources and move them from today's mostly discretionary financing towards more predictable flows. There are numerous such proposals, ranging from major overhauls of the world's financial system to using cell phones to elicit donations from the public. In Annex 1 we present twelve lists of innovative financial mechanisms put forward in recent publications or international forums. In this chapter, we review many of these international FMs, focusing on those that look more appropriate to finance global biodiversity conservation.¹¹

24. To frame this discussion on financial mechanisms, we have assembled below several tables listing on the one hand traditional or well-used FM, and on the other hand seldom-used, or never before used financial mechanism for global biodiversity conservation. We have tried to be as comprehensive as possible, but differences and omissions when compared with similar lists or other experts' opinions are to be expected.

The tables follow the traditional division in (a) Government sources; (b) Voluntary sources; and market and businesses sources. Financial mechanisms in each table are presented in sub-groups, and for each of these sub-groups the tables comment on:

- Its importance as a current source of funding.
- Recent trends
- Future prospects (as assessed by the literature and recent experts' discussions)
- If the mechanism is better suited to fund biodiversity conservation in protected areas (PA), buffer zones (BZ) or production landscapes (PL). Our assumption here is that government and voluntary sources are available for any of the three uses, but may be of particular importance to finance protected areas (PA), where land management options are few and the services provided to society are mostly in the form of public goods (existence, wildlife biodiversity banks, etc). On the other hand, market based financing opportunities may be more suitable to finance BC in production landscapes (PL) that have more flexibility regarding land uses and hence a larger variety of production and services to offer to potential buyers. Buffer zones -- which in some cases are themselves protected areas -- may fall in-between¹².

After each table we briefly discuss the FMs, and in Chapter 3 we pick up the discussion of a smaller group, which could become part of a financial strategy for the conservation of global biodiversity.

¹⁰ See, among others, Bayon, 2000; Anand 2002; Addison et al 2005a and 2005b; Jha, 2002; Landau 2004; Stiglitz 2006a and 2006b; and Touffout, 2006.

¹¹ Actually there are very few biodiversity-specific FMs. (e.g. eco-tourism, protected areas users fees, bio-prospecting, PES). Most FM can be used to fund BC or any other worthy cause, so that for good or for worst BC can be seen as competing or being in the same boat as many other global commons.

¹² In this document we are using protected Areas (PA) as shorthand for IUCN categories 1 through IV and Buffer Zones (BF) as shorthand for IUCN categories V and VI and beyond

2.2.1. Government Sources. Traditional Financial Mechanisms

25. High income countries' ODA (FM 1 through 7 in table 3) is the most traditional, and the largest source of international funds for global biodiversity conservations, and will probably remain so for the foreseeable future. Table 3 gives a very aggregate picture of them. Actually, many specific FM are involved (grants, low cost loans, debt for nature swaps, money and in kind support etc.)

Table 3. Government Sources. Traditional International Financial Mechanisms for Biodiversity Conservation

FINANCIAL MECHANISM (FM)	COMMENTS
<p>High income countries budgetary allocation through ODA</p> <ol style="list-style-type: none"> 1. Bilateral ODA (country to country) 2. Regional ODA (regional organization to country or to a receiving regional organization) 3. Multilateral ODA through GEF grants 4. Multilateral ODA through UN agencies grants 5. Multilateral ODA through other MEA 6. Multilateral, ODA grants and low cost loans through the IBRD Group and regional development banks. 7. Bilateral/multilateral ODA, through official debt for nature swaps 	<p>Current Importance: High Recent trend: Some slowly growing, others flat or slightly diminishing Future prospect: Continue the trend or may be re-energized through increased awareness and innovative approaches as per below Focused on/ more appropriate for: PA / BZ / PL</p>

2.2.2. Government Sources. Innovative Financial Mechanisms

26. Table 4 lists 28 government-driven financing mechanisms divided in six groups:
- High income countries budgetary allocation to international BC, or ODA based on new criteria and commitments.
 - Earmarking for international BC part (or all) of domestic or international taxes on activities that use or deteriorate the global environment.
 - Earmarking for international BC part of domestic taxes not related to the environment
 - Earmarking for international BC part of international taxes not related to the environment.
 - Sharing the costs with future generations
 - Reforms to the international Monetary System

2.2.2.1. High Income Countries' Budgetary Allocations for BC Based in Specific Criteria

27. The common thread of all of these proposed innovations is to move government financing for global biodiversity away from today's competition for a piece of the general discretionary ODA pot and towards more specific and long term commitments, for example:

**Table 4 Government Sources. Innovative International Financial Mechanisms
For Biodiversity Conservation**

FINANCIAL MECHANISM (FM)	COMMENTS
<p>High income countries budgetary allocation to international BC, or ODA based on new criteria and commitments</p> <p>8. Contributions to a global environmental fund, or bilateral investment based in the donor global ecological impact</p> <p>9. Joint implementation (developed + developing country) of BC goals</p> <p>10. An International Financial Facility</p>	<p>Current Importance: None or minimal</p> <p>Recent trend: Technical and policy discussions</p> <p>Future prospect: Moderately good.</p> <p>Focused on/ more appropriate for: PA / BZ</p>
<p>Earmarking for international BC part (or all) of domestic or international taxes on activities that use or deteriorate the global environment.</p> <p>11. A tax on international aviation</p> <p>12. A tax on international navigation</p> <p>13. A tax on the use of the stratosphere</p> <p>14. A tax on trade on tropical woods</p> <p>15. A tax on the use of oceans (on fisheries, or mining the ocean bed, or high sea bioprospecting)</p> <p>16. A tax on greenhouse gasses emissions</p> <p>17. National (or international) auction of (some) carbon credits or other cap-and-trade permits.</p>	<p>Current Importance: Low</p> <p>Recent trend: France and some countries have recently implemented 11 to pay for international health programs (see box 1). The German government is considering implementing 17.</p> <p>Future prospect: Slow progress. Some (e.g.15 a tax on sea bed mining) have made it to international treaties, but never implemented. Others (e.g.10, 15) have been tabled many times. 16 medium.</p> <p>Focused on/ more appropriate for: PA / BZ</p>
<p>Earmarking for international BC part of domestic taxes not related to the environment</p> <p>18. A surcharge on domestic taxation</p> <p>19. Earmarking part of national or local taxes</p> <p>20. A voluntary local tax paid to a global agency</p>	<p>Current Importance: None</p> <p>Recent trend: Discussions in the UN. Some European country governments have at times endorsed some of them. Mostly limited to academic and technical discussions.</p> <p>Future prospect: Low</p> <p>Focused on/ more appropriate for: PA / BZ /AL</p>
<p>Earmarking for international BC part of international taxes not related to the environment</p> <p>21. A tax on currency transactions (CTT /Tobin tax)</p> <p>22. A tax on international trade</p> <p>23. A tax on international arms trade</p> <p>24. A tax on international post and telecommunication</p> <p>25. An international tax on the internet or bit tax</p> <p>26. Charges for exploration in or exploitation of Antarctica</p> <p>27. A tax on the use of the electromagnetic spectrum</p>	
<p>Sharing the costs with future generations</p> <p>28. A long term Green Bond</p>	
<p>Reforms to the international Monetary System</p> <p>29. Incomes generated by the adoption of a world reserve currency (Stiglitz's Drawing Rights)</p> <p>30. Use of high-income countries SDR for global development</p> <p>31. Issue of new SDR for global development</p> <p>32. Sale of part of the IMF gold stock</p>	

28. High income countries could relate their financial commitments for international BC to their ecological footprint (FM 8). The rationale behind this proposal is that it responds to the polluter pays principle, as well as to the common but differentiated responsibilities principle, while leaving to each country to decide where the funding would come from – either from the general budget or specific taxes. The well known ecological footprint methodology (see WWF, 2006) could be used, but there are many alternatives to estimate proxies to a country impact on world biodiversity (e.g., net import of primary products, GDP per square kilometer, etc.)

29. A joint implementation commitment for biodiversity conservation (FM 9) could mimic the CCC Joint Implementation and Clean Development Mechanisms. Namely, high-income and developing countries (or a sub-group of both) would agree to implement jointly a selection of the CBD conservation targets. The rationale for this proposal is that (middle and high income) countries with little biodiversity to conserve could/should pay for the conservation of biodiversity in other countries (more on this in Chapter 3).

30. An International Financial Facility (FM 10) was proposed in 2003 by the UK and endorsed by France, with the goal of increasing international financing for the MDGs. In a nutshell, the IFF would seek to double current levels of ODA (from 50 to 100 billion dollars a year) for a defined period of time and based in firm donor commitment. The IFF could issue bonds to borrow money from international capital markets, against the long term commitment of donor countries, to increase resources available in the initial years, so as to achieve the 2015 MDG (see Mavrotas, 2005).

2.2.2.2. Environment-Related Taxes

31. Instead of reaching into the general public budget to pay for international BC, countries could earmark for that purpose part of the revenues of existing or new taxes on activities that consume, pollute or otherwise damage the global environment (FM 11 through 17). These taxes would at the same time attain a reduction in the consumption or pollution of the global environment, which is good in itself (the size of the reduction depending on the price elasticity of the taxed activity) and would raise funds, part or all of which could be invested in the supply or protection of the global environment, or other global causes. Many proposals have been floated along this line, and a few have been adopted. For example:

- The 1982 UN Convention on the Law of the Sea had provisions regarding the international taxing of mineral exploitation of the deep seabed, but such mining has not happened yet and furthermore most OECD countries have not signed to the convention.
- Other types of taxes related to the use of biodiversity of global significance (tropical wood, stratosphere, the exploitation of high sea) have been repeatedly tabled, but still lack traction. For instance recent technical meetings on marine protected areas have focused on the potential of taxing high sea bioprospecting as a source of revenue for marine protected areas and also as a fund for access benefit sharing (ABS) in accordance with the CBD (see IUCN, 2007)
- On the other hand, taxing greenhouse gas emissions and using part of the revenues to finance environmental conservation and/or other global commons is taking momentum. For example, the German Government has recently proposed that the EU auction some of the carbon emission permits that are currently distributed to industries for free, and use part of the revenue to pay for global BC (FM 17). The proposal is similar to a carbon tax (FM 16), although depending on the legal frame it could be labeled as a tax, a fee or a payment for ecosystem services.

Box 1. The French International Solidarity Tax

In mid 2006 France introduced a new country-wide “International Solidarity Tax” (IST). The IST is levied on all air tickets issued in France, as follows:

- For coach tickets €1 for Europe destinations and €4 for outside Europe destinations
- For business and first class tickets €10 for Europe destinations €40 for outside Europe destinations

It should be noted that the ITS was designed with fund raising purposes, not to reduce aircraft’s air pollution. In its first year of operation the French ITS collected €160 millions that were transferred in full to the recently created Unitaid, an international fund that distributes medicine in low income countries. Working closely with the World Health Organization, and with a first year budget of €225 millions (70% of which was the French ITS), Unitaid initially has focused on combating aids, malaria and tuberculosis among children.

The French example shows that a tax for international purposes is possible. It also shows that it takes a lot of political capital to push it through. In the French case, it took many years of advocacy by France’s former president Chirac (to the extent that in France the ITS is known as “the Chirac tax”), battling the opposition from the French travel industry and the critiques of several foreign governments. Among the current 26 members of Unitaid, only a handful --Chile, South Korea, Madagascar, Niger, and Ivory Coast—have, or are in the process of putting in place a similar air travel tax. All other 20 members contribute to Unitaid from their regular budgets. A particular case is Norway that has earmarked for Unitaid a percentage of its already existing tax on carbon emissions.

Source: Based on a 8/27/07 article from M. Barber, published in RFI Actualité at http://www.rfi.fr/francais/actu/articles/092/article_55734.asp

2.2.2.3. Earmarking Non-Environment-Related Domestic Taxes

32. Following on the French air travel tax (FM11) that goes in full to international aid (see Box 1), there may be an opening for earmarking for international BC other domestic taxes on activities that use or deteriorate the global environment. Particularly if these taxes can be designed in ways that make them attractive to “pioneer” countries willing to go ahead in the absence of a multilateral agreement that may take a long time to come through. Also earmarking for international BC part of an already existing environmental tax may avoid the opposition that any new tax arise among the would be payers (see box 1)

33. In the framework of the discussions on financing the global commons in general and the MDGs in particular, some experts (see Jha, 2002) have suggested piggybacking on existing domestic taxes either by earmarking a portion of current taxes, or adding a surcharge, the latter either on a mandatory or voluntary base (FMs 18, through 20). The mandatory proposals (FM 18 and 19) look more problematic to justify than either earmarking environment-related taxes (previous point) where the polluter pays principle could be invoked; or creating up-front new international taxes (next point) where opportunity and equity could be argued as a rationale. A voluntary tax (FM 20) presents an oxymoron. If it is voluntary it is not a tax, and if it is a tax, it is not voluntary.

2.2.2.4. International Taxes

34. Many different world taxes to raise funds for global development have been discussed (FM 21 through 27). Some have garnered support from a few governments, but none have been implemented yet (see a good discussion in Jha 2002). The best known proposal in this group is a tax on currency transactions (FM 21) also known as the Tobin Tax.

35. Levying a small tax on foreign exchange transactions was first floated by the economist and Nobel Laureate James Tobin in 1972 as a way to reduce short term international capital movements that may trigger exchange rates crises (large devaluations and interest rates that harm economic development in the affected country). Yet it is the fundraising potential of such a tax (with estimates from 17 to 75 billion dollars a year) that has come to dominate recent discussions, particularly during the run up to the 2002 UN Financing for Development Conference (FfD) and the 2004 UN General Assembly's 2004 discussion on innovative financing for development (see UN 2001a and 2001b, also Atkinson 2005).

36. The feasibility and design of a CTT and its variants (e.g. a two tier tax, a tax extending to bonds and derivatives, etc) have been abundantly researched.¹³ Different versions have been endorsed by several governments (e.g. Belgium, Canada, and France) and all versions have been opposed by international financial institutions (IMF, BIS) and the governments where most of the currency transactions take place (USA, UK).

2.2.2.5. A Green Bond

37. One economic problem faced when investing in biodiversity conservation (and in many other environmental activities) is that today's investment will deliver benefits way into the future; but due to a positive economic time preference, the further in the future the benefit, the less valuable it is today (discount rate). It seems fair then that future generations pay for part of today's investment in BC. This could be done through a long term green bond (FM28) which could be issued or backed in different proportions by Northern and Southern countries. This proposal has a lot of similarities with the International Financial Facility recently proposed by the UK government (FM 10); and we discussed it in more detail in chapter 3.

2.2.2.6. Reforms to the International Monetary System

38. It is widely accepted that the current international monetary system is far from optimal, (as gauged by periodical crises, huge trade imbalance and the costs of staggering reserves), and several financial mechanisms have been proposed to reform it (FM 29 through 32).

39. Joseph Stiglitz, also a Nobel Laureate economist, has recently championed the adoption of a new global reserve system (Stiglitz, 2006a, 2006b). The idea was originally envisaged by the late economist J. M. Keynes during the Breton Woods discussion that resulted in the creation of the IMF and the World Bank (Keynes 1942). According to their proponents, a "world reserve money" issued by an international agency would eliminate or significantly reduce countries need to hoard huge reserves of dollars and other foreign currencies. The results of this arrangement could be (a) a more stable global financial system;¹⁴ (b) the "rest of the world" would save each

¹³ See Haq, 1996; Weaver 2003; Nisanke, 2003; Landau 2004; Atkinson, 2005 and Rapport Quadripartite, 2004

¹⁴ Because the supply of world reserve money can easily enlarge or contract as needed, and would be safe from market expectations and exchange runs against it.

year billions of dollars of opportunity costs of hoarding dollars or US treasury bills¹⁵; (c) the US would be freed of the need to run a perpetual trade deficit to feed the world's hunger for dollars; and (d) part of the annual issuing of this world reserve money could be directed to pay for global public goods.

40. Actually, the IMF issued Special Drawing Rights (SDRs) in a limited amount, and assigned them according to the size of each country's contribution to the IMF. The result of this distribution principle is that, as of today, most IMF issued SDRs are owned by high-income countries, which don't need them and have never used them. Hence, the global financier and philanthropist George Soros has championed the proposal that high-income countries donate their current IMF SDRs to a global development fund (FM 30, see Soros, 2002)

41. Other related proposals have been for the IMF to issue more SDR and assign them to less developed countries (FM 31, see Aryeetey, 2005), or to sell part of the IMF gold reserves and use the proceedings for global development purposes (FM 32).¹⁶

42. To this day, most of the above proposals remain highly controversial, and chances that any of them would be implemented in the foreseeable future are low. Although the conservation community should participate in these discussions of global international taxes and of changes to the international monetary system, a CBD financial strategy should not expect much from them in the short run. In terms of government-driven sources, it would be better for the conservation movement to focus on promoting financial mechanisms that are directly related to the environment in general and biodiversity conservation in particular.

2.3. Voluntary Sources. Present and Future

2.3.1 Traditional Financial Mechanisms

43. Voluntary funds collected from the public by NGOs and grants from private foundations (FM 33, 34 and 35 in Table 5) are all important international sources of financing for global biodiversity conservation. Still, the dominant perception among the institutions involved is that contributions from these traditional sources are flat or growing slowly, even though private foundations have been recently enlarged by a strong stock market and contributions from the super-rich (Micklewright and Wright, 2005). Similarly, NGO driven public or private debt-for-nature swaps (FM 36) were pursued with success during the 90s, particularly in Latin America, but the number of these operations has decrease in recent years.

44. Fortunately, here as elsewhere, the main actors are exploring new fundraising mechanisms that may offer opportunities to increase voluntary contributions from households and businesses to fund global biodiversity conservation, and some of these are discussed below.

45. Also, in recent years, conservation NGOs have added to their traditional agenda a strong focus on changing consumption, production and financing behavior of governments, businesses and households. This in turn may result in increasing available funds for global biodiversity conservation. Some of these FM are discussed below in Section 2.4 on markets and businesses.

¹⁵ According to Rodrik (2006) the annual opportunity cost to developing countries of the excess reserves they hoard (that is reserves over 3 months of imports) equals 1% of their GDP.

¹⁶ Ironically this proposal had the support of the IMF management but was opposed by gold producing countries, weary that it could trigger a fall in gold price.

Table 5 Voluntary Sources. Traditional and Innovative International Financial Mechanisms for Biodiversity Conservation

	FINANCIAL MECHANISM (FM)	COMMENTS
More used / Traditional  	Traditional fund raising and funds granting 33. NGOs fundraise from their constituency 34. NGO merchandizing and good causes marketing 35. Foundations' grants 36. NGO-driven public or private debt for nature swaps	Current Importance: Medium to High Recent trend: Flat or slightly growing Future prospect: May increase through innovative approaches Focused on/ more appropriate for: PA / BZ
	Tapping on peoples betting drive 37. Green Lotteries	Current Importance: Low Recent trend: Growing Future prospect: Large opportunities Focused on/ more appropriate for: PA / BZ / PL
Innovative / Never used	Tapping on the mega-rich 38. An international biodiversity fund based on businesses and private contributions	Current Importance: Low Recent trend: Growing Future prospect: Good. Focused on/ appropriate for: PA / BZ /
	Newer good-will fund-raising instruments 39. Sister Parks (North/South or South/ South) 40. Adopt a Park 41. Round ups 42. Internet charity shopping 43. Affinity credit cards 44. Cell phone based donations	Current Importance: Low Recent trend: Growing Future prospect: Good. Focused on/ appropriate for: PA / BZ /

2.3.2 Innovative Financial Mechanisms

2.3.2.1. Green Lotteries

46. Lotteries (FM 37) have been a fixture in human society for millennia, and in the last century governments have routinely earmarked some portion of lotteries' revenues to pay for highly visible social expenditures like education, health and, more recently, environmental conservation. There are also examples of private charity lotteries dating back to the sixteenth century. Private charity lotteries, namely private not-for-profit lotteries whose sole purpose is to raise funds for civil organizations, have been growing in recent years, particularly in Europe, where the Netherlands is the star case with a consortium of three charity lotteries that in 2006 distributed 300 million Euros among Dutch civil society organizations. While lotteries are old, this new crop of private charity lotteries are sophisticated undertakings, combining communication, technology, outreach and transparency to increase public appeal (see Box 2).

Box 2. Charity Lotteries. The Netherlands Experience

The Netherlands National Charity Lotteries began in 1989, distributing 4 million Euros among 3 NGOs. By 2006, they were distributing 300 million Euros among 120 civil society organizations, including sustainable development, human rights and environment protection organizations (e.g. Amnesty International, WWF and Oxfam among many others). The success of charity lotteries in the Netherlands is based in innovation, including:

- Transparency on funds' management and distribution. From the lottery revenues, 30% goes to prizes, 50% is distributed to charities and 20% covers the lottery management costs.
- High media visibility for both the winners and the charities. The result is that one third of the Netherlands households regularly buy charity lottery tickets.
- Close cooperation with the media. Lottery winners are hosted by TV shows along with presentations of the work done by charity beneficiaries.
- Innovative lottery systems. For instance in the Postcode lottery, postcodes (zip-code) are the lottery numbers, so when a postcode wins, the entire neighborhood/district/street shares the winnings.

Similar Postcode lotteries have been launched in Sweden and the U.K. and are currently being explored in several other countries. On the other hand in some countries (e.g. Germany, USA) lotteries are the monopoly of federal or state level governments and attempts to establish private charity lotteries have failed to gain legal foothold.

Source: Kingma and Lier 2006, Koch-Weser and Jacobs 2007

47. Current private charity lotteries are of national or sub national scale and most (but not all) of their benefits are distributed to their country's civil society organizations (CSOs). Some CSOs (e.g. Oxfam and WWF in the Netherlands) have a strong international reach, meaning that a significant portion of the funds they receive support social and environmental programs around the world.

48. There is considerable interest in using charity lotteries as a way to raise funds for the MDGs in general and for biodiversity conservation in particular. In 2004, the president of Finland proposed such a global lottery at Monterrey's United Nations Financing for Development Conference, and the idea has been picked up by many international forums and development experts, which estimate its fundraising capacity in some 6 billion USD a year (Addison and Chowdhury 2005).

2.3.2.2. An International Biodiversity Fund Based on Businesses and Private Contributions

49. In recent years, several issue specific international funds have emerged (e.g. to fight HIV), capitalized by large businesses and private donations. They are the outcome of two factors (a) an issue that galvanize the world community; and (b) the emergency of large private donors that want to play an active role in the use of their donation. Protecting the world's biodiversity can become one such issue (we discuss this FM 38 further in the following chapter).

2.3.2.3. New Goodwill Fundraising Instruments

50. Many conservation NGOs are experimenting with new fundraising technologies or importing financial mechanisms that have been successfully tried in other areas of national and international cooperation, including:

- Sister Parks, (North-South and South-South). This mechanism (FM 39) would be similar to the sister cities movement. There is already a good deal of technical cooperation between protected areas agencies around the world, but more could be done, including transfer of financial resources from richer to poorer parks. Such transfers are justified in that many surveys in high-income country have found a significant willingness to pay (WTP) for international conservation among the public. Of course, such transfers should not jeopardize conservation budgets of high-income countries' protected areas, and there are many ways to ensure that that does not happen.
- Adopt a Park (FM 40). Many countries "adoption" campaigns have been successful in attracting support from the public and from businesses for a variety of causes and sites, from children's health and education to urban parks and highways. The same approach has also been used in conservation, particularly in relation to charismatic species. Most of these programs are based on fostering a special relation between the donor and the recipient, through information visits, token presents and public recognition (especially for business sponsors). Protected areas in developing countries may have many opportunities to build such a relation with foreign constituencies.
- Round ups (FM 41). In this mechanism, users allow utilities to round up (or salary payments to round down) the cents in their bills and donate the cents to a designated charity. Collection and transfer costs are low because modern payment systems are highly standardized and internet based. Even if each donation is just cents, the totals can be huge (see Koch-Weser and Jacobs 2007 for detailed descriptions of this and the three following financial mechanisms FM 42, 43, and 44).

2.4. Markets and Businesses

2.4.1. Tourism and Biodiversity Conservation

51. Foreign visitors and the tourism industry (FM 45 and 46), particularly nature-based tourism and eco-tourism, and the special interest industry that caters to them (safari, hiking, fishing, etc), are all traditional, market based, international sources of income for protected areas and nearby buffer zones in many developing countries. There are no estimates of what portion of the 6 trillion dollar-a-year international tourism industry goes to eco-tourism, or how much the eco-tourism business actually contributes to biodiversity conservation. But, there are many success stories –such as the case of Namibia's conservancies, described in Box 3 below-- and many opportunities ahead, considering the rapid growth forecasted for international tourism and eco-tourism. Still, international tourism and eco-tourism are at the same time a potential source of financing for biodiversity conservation, and a threat to it, since too much tourism (human traffic) can easily overwhelm biodiversity.

52. There are many traditional and innovative ways to make tourism and recreation a source of funding for biodiversity conservation, among others:

- PA entrance fees
- Fees charged inside the PA for specific recreational activities (trekking, camping, fishing, etc)

Table 6. Markets and Businesses: Traditional and Innovative Financial Mechanisms for Biodiversity Conservation

	FINANCIAL MECHANISM (FM)	COMMENTS
More used / Traditional ↑ ↓ Innovative / Never used	Tourism 45. Foreign tourists and eco-tourists (households) 46. Tourism and eco-tourism industry catering to foreign visitors	Current Importance: High to low depending on location Recent trend: Growing Future prospect: Fast growing activity but impact on PA may be problematic and distribution of tourism benefits may pose challenges Focused on/ more appropriate for: PA / BZ
	Businesses initiatives 47. International businesses good will environmental investments 48. Businesses' codes of conduct and voluntary standards 49. Private-Public Partnerships 50. Private- NGOs Partnerships	Current Importance: Medium Recent trend: Growing Future prospect: Good Focused on/ more appropriate for: PL
	Green markets 51. Eco Labeling schemes 52. Promotion of green consumption and production 53. International trade in organic, fair-trade, sustainable products 54. International green investment funds	Current Importance: Medium Recent trend: Growing Future prospect: 50, 51, 52 Very large opportunities, 53 slow growth outside the clean energy sector Focused on/ more appropriate for: PL

- Visitors donations
- Fees charged to private vendors inside the PA (private food stands, restaurants, lodges, tourist operators)
- Fees or taxes charged to tourist-related activities outside (but in the proximity) of protected areas (e.g. charges on nearby hotels and tourist related businesses, cruises, land transport etc.)
- Fees or charges on foreign tourists (used in some countries where nature based tourism is the major attraction for foreign tourists)
- Community based conservancies that use part of the tourism and safari revenues for BC (see box 3)
- Public-private partnerships to invest in environmentally friendly tourism developments with part of the benefits earmarked for biodiversity conservation
- Idem for Public- communities and public-NGOs partnerships
- Idem for Private- community and private-NGOs partnerships
- Idem for communities- NGOs partnerships
- Regulations, incentives or partnerships with the tourist development industry to reduce their ecological impact in areas of biodiversity value (e.g. through EIA, environmental friendly building and operation standards, biodiversity offsets, etc)
- Regulations, incentives or partnerships with the nature based and eco-tourism industry to

reduce their ecological impact and increase their biodiversity pay off (e.g. through development of eco-tourism circuits, environmental friendly building and operation standards best practices standards, etc)

Box 3. Namibia Conservancies' Extraordinary Success, and the Limitations of the Model

Namibia, in the Southern East coast of Africa is a sparsely populated middle size country, with 2 million inhabitants (in 2005) on a 0.8 million Km² territory, resulting in a population density of less than 3 persons per square kilometer.

Mining and urban activities make Namibia a low middle-income country, but jobs and incomes in rural areas are scarce. The country is arid and semi arid, with less than 10% of the territory covered by forests and more than 50% of the land unsuitable for agriculture. On the other hand, Namibia's rural areas feature dramatic landscapes and outstanding biodiversity and mega fauna.

This combination of low rural population, low agricultural potential and good ecotourism opportunities mobilized Namibia's and the international conservation community to develop one of the world's most successful CBNRM programs. In 1987, Namibia passed a law giving rural communities the right to manage and profit from the wildlife in their territories, provided that the local population organized a conservancy and had a wildlife management plan. The first community conservancy was established in 1998. By the end of 2006 there were 50 registered conservancies encompassing 11.8 million hectares; or 14% of the country's territory, with 230 thousand members, or 11% of the country's population. From 1998 through 2006, foreign aid had contributed approximately 100 M. dollars to this program.

The achievements of Namibia's conservancies are commensurate with their size and by 2006 included: (a) well documented substantial increases in wildlife population; (b) a well documented focus and positive impact on rural poverty reduction; (c) one-third of the conservancies covered all their costs, mostly through the sale of safari rights to private tourist operators; (d) 794 full time and 5,100 part time jobs created; (e) 4 M. dollars of revenues to conservancies and 13.3 M. dollars a year of revenues to related natural resource based enterprises; plus (f) development of safety nets; diversification of land use; diversification of sources of livelihood; capacity building and training for CBNRM and tourism; empowerment and strengthening of local institutions.

Through all of these achievements, Namibia's conservancies are making an important contribution to the country's biodiversity conservation and, in a more modest scale, to poverty alleviation. Furthermore they are fully integrated into the country's long term development and poverty alleviation strategies, with a 2030 national target of 65 conservancies and 100 M. dollars of employment and tourism incomes.

Namibia's conservancies experience has important lessons for biodiversity conservation elsewhere, including: (a) the model requires a combination of very low population densities and valuable biodiversity resources; (b) it also requires good governance, skilful program design, and significant investment in capacity building of local communities; and (c) the long term support from many national and international partners has been critical to the success of the program

Source: NACSO, 2006, LIFE 2007 and personal discussions with the LIFE team

2.4.2. Business Initiatives

53. International businesses' goodwill environmental investments (FM 47) are a traditional source of funding; though they are small when compared with funding from business-supported foundations (FM 35). Furthermore, it is usually bestowed near the businesses' location, so its importance as a source of international funding for biodiversity conservation is very site-specific. Still, it is moderately growing. Large business-related donations and funds could be included here but we discussed them under voluntary sources (FM 38) because they usually depend on the personal interest of one (or several) of the businesses owners

54. Businesses codes of conduct and other voluntary standards (FM48), as well as other market based initiatives, strictly speaking are not fundraising mechanisms, in that they are not supposed to raise money to put in a conservation fund (like ODA or voluntary contributions). What they do instead is to alter the behavior of some stakeholders in a way that reduces their pressure/damage on the environment and on biodiversity. In the end, this would reduce the need and the costs of biodiversity conservation, and that is the reason we listed here. Businesses codes of conduct and other voluntary standards may encompass, among others: increasing energy efficiency, moving to renewable sources of energy, increasing efficiency in the use of nature-based inputs, procuring inputs from environmental sustainably sources, utilizing bio-degradable inputs and packaging, adopting best production practices etc.

55. Promoting private sector codes of conduct and voluntary standards in the food and natural resource based industries is an area where NGOs have been very active, enlisting large buyers (e.g. Ikea's pledge to buy certified wood, or Wal-Mart's decision to sell certified fish and sea food). As discussed below under green markets, these changes may bring international financial resources to global biodiversity conservation through increasing the demand for sustainably produced goods from productive landscapes. This should not only help biodiversity conservation in production landscapes but should also reduce pressure over PA and BZ. Businesses' motivations to adopt these voluntary codes are varied, including new market opportunities; gaining public goodwill (a social license to operate); responding to consumers or NGO demands; assuming a leadership role; following the advice of business associations; staying-off government regulations; or leading the design of future regulations. Of course, the BC benefits of certifications and other voluntary standards depend (a) on how well the standard has factored in biodiversity conservation (e.g. many "organic food" standards have little biodiversity pay offs); and (b) how well the standard is actually applied by the industry; and in both accounts there is a lot to be done.

56. Private-Public Partnerships (PPP) and Private- NGOs Partnerships (FM 49 and 50) are very recent undertakings. As examples of PPP, the GEF has just (July 2007) put up a PPP that, among its first initiatives, will offer a prize for technological breakthrough on carbon sequestration. DGIS, the Netherlands Development Cooperation Agency, has a budgetary line earmarked for PPP that has engaged private companies in water and sustainable agriculture projects in Africa and Latin America. Several other development cooperation agencies and development banks have similar ongoing programs. Regarding Private- NGOs Partnerships, there have been a good number of them, too, (e.g. WWF with Lafarge and Coca-Cola) particularly in the area of eco-labeling and greening businesses' procurement and production practices. Governments and NGOs have great expectations for these partnerships with the private sector. The fact is, these are just beginning and neither governments nor NGOs yet fully understand what motivates the private sector to enter into these sorts of partnerships.

2.4.3. Green Markets

57. Eco-labeling schemes (FM 51) have been championed by NGOs, (certified wood, certified fish, sustainable soy, etc) and have met increasing business and consumer interest. Certification has grown exponentially in the last 15 years, and still has a large potential to grow, and also a large potential to improve their on-the-ground conservation impact thus becoming a force for biodiversity conservation on production landscape.

58. Green markets (including organic, fair trade, and sustainably produced goods) (FM 52, 53) are the other side of the eco-labeling coin, and with well over 30 billion dollars a year of world sales they command a small but fast-growing share in the world's food and fibers market. Furthermore, global demographic trends --an increasingly urban, older and richer population— suggests that demand for healthier, more natural (organic) and more environmentally friendly foods and fibers will continue to grow, raising large opportunities to leverage green markets to finance sustainable agriculture and biodiversity conservation in productive landscapes¹⁷.

59. Green investment funds (FM 54) have been growing in high-income countries, mostly focusing on investing in the pollution control industry, clean energy and environment-friendly manufacturing industry. The few attempts during the 90s' to put in place international green investment funds to invest in biodiversity related businesses in developing countries folded due to poor performance or lack of investment prospects (Emerton et al, 2006). Lately, new investment funds in clean energy and carbon sequestration have emerged and may open new opportunities to finance biodiversity conservation in developing countries, particularly in projects related to bio-carbon sequestration (see Bayon 2007).

60. How much can green markets, and green investment funds become an important source of financing for mainstreaming biodiversity conservation into productive landscapes and seascapes of developing countries? The answer depends largely on developing countries having the opportunity and capacity to produce and export green products and ecosystem services. Similarly, international green markets and green investment funds may become an important source of rural jobs and income for the rural poor of developing countries, provided small farmers are able to participate in such markets (see Box 4).

2.5. International Payments for Ecosystem Services and Biodiversity Conservation

61. Opportunities to finance biodiversity conservation through PES schemes have attracted a lot of attention in the last decade. Down to its bare bones, the PES concept looks straightforward: those who benefit from nature's services should pay those who shoulder the cost of ensuring the provision of the ecosystem services in question. In practice, the issue is much more complex and discussion lingers regarding many of the nuts and bolts: What qualifies as an ecosystem service? When does it deserve (or need) to be paid for? Can governments be the buyers? What are PES best practices? What has been thus far the on-the-ground environmental and livelihood benefit of PES schemes? In Annex 2 we briefly discuss some of these issues (and a more detailed discussion can be found in Gutman 2007, FAO 2007, and Wunder 2005).

62. There are currently many PES schemes at work around the world, but most of them are of local scale (usually regarding watershed-related ecosystem services in a small watershed); a few

¹⁷ Before we get carried away by multibillion market figures (30 billion in organic food sales, 22 billion in carbon trading, etc) it is good to remember that final market figures are a poor indicator of the money that actually reaches the farm, let alone the money that the farmer will actually invest in biodiversity conservation.

are country-wide (usually related to forest conservation); and even fewer are international, e.g. buyers in rich countries, sellers in developing countries. Among the latter:

- Regulated bio-carbon offset markets (FM 55), are still a drawing board idea but one that is attracting increasing attention. Following the Kyoto Protocol, regulated world carbon trading is already big, with estimates of some \$22 billion of trade in 2006. In that big total the share of bio carbon, mostly reforestation, is currently very low, But things are changing fast, and bio-carbon carbon markets are expected to grow to some \$1.5 billion in the next decade, and then keep growing. This may open significant opportunities to mainstream biodiversity in production landscapes of developing countries, through bio-carbon payments for reforestation and agro-forestry. Of course the biodiversity benefits of reforestation and agroforestry projects depend on how they are done. Reforestation with few or exotic species may have little if any BC payoffs. It may also be the case that reforestation and agroforestry with high biodiversity values is more expensive and hence not attractive for would-be buyers of bio-carbon. In that case If reduced emissions from avoided deforestation (AD) or of reduced deforestation and degradation (REDD) make it to the post Kyoto negotiations, the bio-carbon market may become a financial source for protected areas and native forests in developing countries (see Ebeling, 2006)
- Voluntary markets for bio-carbon (FM 56). In parallel to the Kyoto convention, there is a growing voluntary carbon market that in many cases has paid for the conservation of forests in developing countries (e.g. the GEF supported Costa Rica and Mexico payments for forest conservation programs, in FAO 2007), Thus far, major buyers have been governments, businesses and international agencies, and it could be expected that in an enlarged post-Kyoto agreement, part of this demand will move to the regulated markets. Still, there are good reasons to believe that the voluntary market will keep growing, fueled by the demand of non-regulated sources that want to become carbon-neutral (offset your trip, your vacation, your office, your business). Already some of the largest internet air ticket vendors prompt you to buy carbon or environmental offsets as part of your ticket booking (see www.expedia.com). Markets for voluntary households environmental offsets (FM 57) can be especially appropriate to attract “carbon-plus buyers,” namely buyers willing to pay a premium for carbon sequestration with high biodiversity conservation and social equity standards that are not contemplated in the CCC-driven market (see Richards and Jenkins, 2007).).
- The GEF as a source of PES (FM 58). Beginning in 1998, the GEF has built a portfolio of some two dozen international PES projects. The majority is part of the biodiversity focal area implemented by the World Bank, and is concentrated in Latin America. In these projects GEF moneys have gone to pay for institutional development, capacity building and to directly pay for the part of the ecosystem services that are of global significance (see Box 5). Looking to the future, the GEF, considers PES a key instrument to achieve two of the three GEF biodiversity strategic objectives (SOs): SO1 Catalyzing Sustainability of Protected Area Systems; and SO2 Mainstreaming Biodiversity in Production Landscapes/Seascapes and Sectors (GEF 2007).
- Bio-prospecting (FM 59) raised high expectations in the 1990s when Costa Rica signed several contracts with international pharmaceutical companies that paid for the rights to prospect for new drugs in Costa Rica protected areas. But bio-prospecting has thus far failed to become a significant source of PES.
- Biodiversity offsets. Several international corporations and conservation institutions are

currently exploring the pros and cons of voluntary biodiversity offsets (FM 60), where a company pays for biodiversity protection or restoration as a way to voluntarily compensate for the ecological impact of its activities (see the work of the Businesses Biodiversity Offsets Partnership BBOP at <http://www.forest-trends.org/biodiversityoffsetprogram/>). Some of the initial cases of BBOP are of international corporations paying for biodiversity offsets in developing countries (Bishop et al, 2006). The whole idea is in its beginning and even on a voluntary base it has raised criticism from conservation stakeholders concerned with the possibility that the concept of biodiversity offsets could open the door to increased on-site negative impacts (see WWF, 2006)

Mandatory biodiversity offsets are increasingly common at national or sub-national levels. In the USA, offsets target specific ecosystem features, (e.g. wetland banking, where developers must create or restore the same amount of wetland they plan to drain; or the nutrients cap-and-trade trials in some basins). In Europe, the Netherlands and Germany have more encompassing regulations that require biodiversity offsets for a large array of developments and environmental impacts. Lately, there have been technical discussions regarding the feasibility of putting in place a type of regulated biodiversity offsets, and possibly of moving them to an international scale (FM 61). Still, the idea that environmental damage in one country can be compensated by improving the environment in another country raises many concerns, among others that it may undermine offset activities at local or national levels, that it may reduce financing for national and local conservation projects, that it could lead to relaxing requests to avoid negative local level social and environmental impacts, and that equating or substituting biodiversity in one place with biodiversity in another place may be neither socially nor ecologically acceptable.

Box 4. Green and Fair Markets. Figures and Cases

- Globally, about 26 million hectares of land are farmed organically, and the global market for organic products is valued at around \$30 billion. Growth rates for organic product markets vary between five per cent and 40 per cent, depending on the country and the product (ISSD, 2003).
- Sustainable forest products are another quickly growing green market. Over the past 13 years, over 90 million hectares in more than 82 countries have been certified according to Forest Stewardship Council.
- Fair trade sales have increased by 10 per cent annually since the 1970s, reaching approximately US\$400 million in 2000. Certified organic coffee in the Fair Trade market receives about a \$.15 premium per pound, and the Fair Trade network ensures that workers are paid fair wages in the local context; supports participatory workplaces; ensures environmental sustainability; supplies financial and technical support; respecting cultural identity; offers public accountability; and educates consumers.
- In Nicaragua, Hacienda San Rafael coffee farms used to combat the destructive borer beetle with 132 gallons of Endosulfan pesticide each year. Since becoming certified under the Rainforest Alliance's certification program, the coffee farm has replaced the pesticide with 'good practices' such as planting under the shade of over a dozen native tree varieties, keeping the ground clean of fallen berries to deter pests, regular monitoring to prune infected areas, using compost from the farm rather than synthetic fertilizers, and other such 'green' farming practices. In addition to providing workers with meals and salaries than those typical in the area, Hacienda San Rafael built and staffed a school that educates the children from the farm and surrounding communities and offers adult education, providing the students' books, uniforms and lunches. The farm also operates a health clinic in which a doctor makes regular visits twice a month.

Sources: www.fsc.org; www.fairtradefederation.org; www.rainforest-alliance.org; <http://www.ifoam.org/> and Ladron 2003

**Table 7. International Payments for Ecosystem Services.
Innovative Financial Mechanisms for Biodiversity Conservation**

FINANCIAL MECHANISM	COMMENTS
<p>International Payments for Ecosystem Services</p> <p>55. Regulated International market for bio-carbon offsets</p> <p>56. Voluntary International market for bio-carbon offsets</p> <p>57. Voluntary households environmental offsets</p> <p>58. GEF payments for global biodiversity conservation</p> <p>59. Bio-prospecting fees</p> <p>60. Voluntary international business biodiversity offsets</p> <p>61. Regulated international business biodiversity offsets</p>	<p>Current Importance: 54 through 58 Medium to low / 59, 60 Low/ 61 None</p> <p>Recent trend: 54 through 58 and 60 Growing / 59 Flat / 61 None</p> <p>Future prospect: 54, 55, and 57 Very large opportunities /58 and 60 Moderate growth, 56, 59, and 61 Low</p> <p>Focused on/ more appropriate for: PA / BZ / PL</p>

Box 5 The GEF PES Experience: Still in the Fringe of Conservation Financing

What is it? As of mid 2007 the GEF’s PES portfolio was small: less than two dozen projects; almost all were in the GEF Biodiversity Focal Area with the World Bank as implementing agency. Most of them were in Latin America and the portfolio consisted of three types of PES projects:

- Support for country-wide PES schemes (Costa Rica, Mexico). These programs are country driven, using public moneys to pay farmers and rural communities for natural forest protection in private or communal lands outside public protected areas. The ecosystem services of interest are watershed protection, biodiversity, carbon sequestration and landscape conservation for tourism. The buyers and payers are the national governments and the GEF. Private buyers are a minority.
- PES schemes as source of incomes for the management of protected areas and/or buffer zone (Peru, Ecuador, Lesotho/South Africa, Bolivia, Colombia, and Venezuela). Only in a few cases (Venezuela’s Canaima PA; Lesotho/South Africa) the PES component is well developed and buyers are identified (e.g. hydroelectric company in Venezuela). In all other cases, PES is simply one among several sources of funding to be explored.
- Local level PES schemes to pay farmers and other land owners or managers for ecosystem services associated with sustainable agricultural practices (e.g. the Silvo-pastoral project in Nicaragua, Costa Rica and Colombia; and local projects in Dominican Republic, Kenya, and Venezuela’s Andes). As in the above group, only in a few cases (e.g. the Silvo-pastoral project) are PES schemes central to the project and well defined from the beginning. Major buyers and payers in this group are governments and the GEF.

How it has performed? Thus far, the GEF PES portfolio has been important to develop institutional frameworks and to build capacity in many countries. When the recipient country had previous PES experience (e.g. Costa Rica, Ecuador, Mexico), GEF projects have still been important to improve the design, management and delivery of the pre-existing programs as well as for bringing in co-financing.

Regarding buyers and sellers, all GEF PES portfolio projects are driven by government and GEF payments, while private buyers are a minority. Regarding country level impacts, the GEF PES portfolio is a collection of small projects, and with the exception of Costa Rica, their country-wide direct impact will be minimal, either in terms of biodiversity conservation, mainstreaming conservation in productive landscapes, sustainable agriculture, or rural social indicators. Take, for example, the case of the two country-wide programs.

- In Costa Rica after 10 years of paying landowners to conserve natural forests, the area under contract is significant: some 15% of the country's natural forests; yet the annual payments—some 10 million dollars a year—represent less than 0.6% of the country's rural income.
- In the case of Mexico, which so far has spent 20 to 30 million dollars per year in its PES program, the area under contract by late 2006 was less than 0.1 % of the country's natural forests and the annual budget for PES was less than 1% of the country rural subsidies.

What are the lessons? So far the most important lesson from the GEF PES portfolio is that a lot of replication, and scaling-up of existing projects plus the design and implementation of new types of PES projects will be needed, in order to make PES schemes a significant financial source for biodiversity conservation and rural livelihoods.

Based in FAO. 2007

2.6. Summing Up

63. Through this chapter we have briefly discussed some 60 financial mechanisms, of which 20 can be labeled traditional because they have been at the core of financing for BC since the CBD inception; and the other 40 can be labeled innovative, either because they are relatively new or have never been attempted. Many of these FM, traditional as well as innovative, have been the focus of research and discussion and the reader can find more details in the publications mentioned in this and the following chapters and in Annex 1. However, a list of financial mechanism is just an input to discuss a financial strategy, which is what we attempt in the following chapters.

3. Focusing on a Short List of International Financial Mechanisms to Support Developing Countries' Protected Areas

64. Many lists of financial mechanisms are just that, a list that gives readers little clues about each financial mechanism's potential and limitations. To go beyond that here we focus in a short list of FM that could become the backbone of international financing for a world system of protected areas. We acknowledge that any short list is somehow idiosyncratic, and different parties may want to add or delete from it. In our case the financial mechanisms in the table 8 below have been selected from the list of 60 plus FMs discussed in Chapter 2, based in the following criteria:

- To include the traditional FMs that thus far have been the core of financing for PAs.
- To select innovative FM mechanisms that touch upon the three main drivers of financing for BC, namely governments, non-profits and businesses & markets.
- To select both direct fundraising mechanisms (mechanisms capable of delivering funds in the short run), and market development mechanisms (that require a longer maturation period).
- Regarding government sources, to select mechanisms that would move government financing from today's one-hundred percent discretionary financing towards more binding and stable financial commitments.
- To select innovative FM that either are already at work but need to be scaled-up, or that are brand-new but do have some level of support among CBD members.

65. The three first traditional mechanisms are well known and we comment on them briefly. For each of the seven innovative international financial mechanisms in the table (number 4 through 11), we discuss here (a) What is it? (b) What is the rationale? (c) How would it be different from the current situation? (d) Background and support for the proposal (e) Pros and Cons; (f) What needs to happen in the short run to implement it; and (g) What is needed to scale-up in the long run.

3.1. Traditional Financial Mechanisms. There is Still Growth Potential in Them

66. High-income countries' ODA is the most traditional, and the largest source of international funds for global biodiversity conservations, and will probably remain so for the foreseeable future. Still, many innovations could happen here and two of them are several are listed in the table.

67. Foreign visitors and the tourism industry, particularly nature-based tourism and eco-tourism, and the special interest industry that caters to them (safari, hiking, fishing, etc), are all traditional, market based international sources of income for protected areas and nearby buffer zones in many developing countries. There are no estimates of what portion of the current 6 trillion dollar-a-year international tourism industry goes to eco-tourism, or how much the eco-tourism business actually contributes to biodiversity conservation. But, there are many success stories and many opportunities ahead, considering the rapid growth forecasted for international tourism and eco-tourism. Still, international tourism and eco-tourism are at the same time a potential source of financing for biodiversity conservation, and a threat to it, since too much tourism (human traffic) can easily overwhelm biodiversity.

68. Voluntary funds collected from the public by NGOs and grants from private foundations

are all important international sources of financing for global biodiversity conservation. Still, the dominant perception among the institutions involved is that contributions from these traditional sources are flat or growing slowly, even though private foundations have been recently enlarged by a strong stock market, and contributions from the super-rich. Similarly, NGO driven public or private debt for nature swaps were pursued with success during the 90s, particularly in Latin America, but the number of these operations has decrease in recent years.

Table 8. A Short List of International Financial Mechanisms to Support Developing Countries' Protected Areas

Financial Mechanism (FM)	A. Traditional B. New, but Already Initiated C. Brand New	Main Actors Involved
Traditional Financial Mechanisms		
1. High income countries' budgetary allocations through ODA (FMs 1 through 7)	A	Governments
2. Voluntary sources (NGOs, Foundations, households) (FMs 33 through 44)	A	Non-for-Profit
3. Tourism (FM 45 and 46)	A	Businesses Non-for-Profit
Innovative FM to increase government driven financing		
4. Joint-implementation of selected CBD targets (FM 9)	C	Governments
5. Auction or sale of part of the carbon emission permits and other cap-and-trade schemes (FM 17)	C	Governments
6. Issuing long term "green-bonds" (FM 28)	C	Governments
Innovative FM to increase financing from voluntary sources		
7. Green Lotteries (FM 37)	B-C	Non-for-Profit Businesses Governments
8. International biodiversity funds based on business/private contributions (FM 38)	B-C	Non-for-Profit Businesses
Innovative FM to increase businesses and market based financing		
9.. Foster international markets for regulated bio-carbon offsets (FM 55)	B	Governments Businesses Non-for-Profit
10. Foster international markets for voluntary bio-carbon and voluntary bio-diversity offsets (FMs 56, 57, 60)	B	Businesses Non-for-Profit Governments
11. Foster green markets, including ecological certification and markets for sustainable production and ecosystem friendly products (FM 51 trough 54)	B	Non-for-Profit Businesses Governments

69. Fortunately, here as elsewhere, the main actors are exploring new fundraising

mechanisms that may offer opportunities to increase voluntary contributions from households and businesses to fund global biodiversity conservation, and one of these –green lotteries -- is discussed below. Also, in recent years, conservation NGOs have added to their traditional agenda a strong focus on changing consumption, production and financing behavior of governments, businesses and households. This in turn may result in increasing available funds for global biodiversity conservation. Some of these financial mechanisms are also discussed below.

3.2. Some Innovative Financial Mechanisms to Increase International financing from Governments

70. International public finance has many advantages, including that (a) money is collected fast; (b) at low costs; and (c) funds can be directed to biodiversity conservation priorities. But, it all depends on potential funders' willingness to give the funds. We discuss below three proposals that merit consideration

3.2. 1. Joint-Implementation of Selected CBD Targets

71. **What is it?** One or more developed countries agree with one or more developing countries to jointly implement one or several CBD goals, or a subset of them (e.g. financing part of a global network of high value protected areas; or financing part of a network of tropical protected areas, etc). Developed countries would contribute financial resources on a long term predictable base and the developing countries would contribute the biodiversity resources to be protected. Developed countries could make their contributions to an existing or new implementation fund, or could manage this program through their bilateral aid.

72. **What is the rationale?** The CBD has put forward ambitious goals in terms of expanding the world's protected areas, but right now a large part of the direct and indirect costs of achieving these goals fall on poor, biodiversity-rich, countries that lack the resources to adequately fund conservation efforts on their own (see Point 1.2 and Figure 3 in Chapter 1 of the full report). A joint implementation approach, where high-income countries with lower biodiversity team up with developing countries with higher biodiversity, would address this problem and bring new impetus to biodiversity conservation.

73. **How would it be different from the current situation?** Currently, high-income countries do contribute to biodiversity conservation in developing countries, but they do so year by year and on a discretionary base. The only exception is contributions to the GEF that are also discretionary, but on a 4-year cycle. Short term, year to year variability and overall low levels of financing, all of them act against the long term character of biodiversity conservation. The joint implementation mechanism would move international financing for biodiversity conservation from today's one-hundred percent discretionary financing towards more binding and stable financial commitments.

74. **Background, support** Although a CBD joint implementation scheme has not been tabled before, similar mechanisms exist or have been proposed in other international cooperation areas, for example:

- The CCC Joint Implementation and Clean Development Mechanisms;
- An International Financial Facility (FM 10) was proposed in 2003 by the UK and endorsed by France, with the goal of increasing international financing for the MDGs. In a nutshell, the IFF would seek firm commitments from rich countries to double current levels of ODA (from 50 to 100 billion dollars a year) for a defined period of time.

75. **Pros and cons** The pros of the joint implementation approach include:

- Its appeal to the equal but differentiated responsibilities principle;
- The CCC has made joint implementation a familiar concept;
- It could raise significant amounts of money;
- Contributions from rich countries could come either from their general aid budget, or from environmental related taxes and fees (e.g. the auction of carbon permits discussed below, or any other of the many environmental related taxes that have been proposed in the recent past (FM 11 to 27))
- Joint implementation of biodiversity conservation can be clearly related to specific locations and specific targets, giving citizens and governments of donor countries a sense of partnership and achievement that is absent in more general aid.

The cons include:

- Many donor countries reject the idea of long term funding commitments (the fabled 0.7% of GDP for international development aid);
- Many donors are against earmarking portions of their international aid.

76. **What needs to happen in the short run?** The best short term development would be at least one high-income country stepping forward and committing several million euros or dollars for the next 5 years, to invest in joint biodiversity conservation programs and to champion the joint implementation idea at the CBD, the GEF and other international forums. Finding a few willing countries may not be so difficult. For instance, the Nordic countries have been investing in climate-related joint-implementation projects long before it was regulated by the CCC. And it could be argued that being early starters makes more sense in biodiversity conservation than in climate change, since a small and early initiative in climate change may have negligible climate change impacts, whereas even small investments in biodiversity conservation could result in critical gains.

If there is no high-income country willing to step forward with a significant financial commitment, a more modest short-term goal could be to secure some support and resources to bring together a group of high-income and developing country representatives, agencies and experts, to discuss the idea and come up with a more detailed proposal on how it could/should be done (e.g. elaborate on who should contribute how much, what relation with existing funds and agencies, what type of conservation projects, etc.).

77. **In the long run** The best long run scenario is that (a) the joint implementation of the CBD goals is adopted as a principle by the parties to the CBD, (b) many countries pledge long term resources to it; and (c) efficient ways to manage those funds are in place.

3.2.2. Issuing Long-Term Green Bonds

78. **What is it?** A bond with 20 to 30 years to maturity, denominated in euros, dollars or a basket of currency, issued by a group of countries (or by each country separately if this avoids legal complications), underwritten by an international financial agency or private brokers and traded in financial markets. Because it is issued and paid by rich countries the bond will be a low risk, low interest investment and hence attractive to a large segment of the investment market. The money raised with the green bonds would be invested on international biodiversity conservation. On maturity the bonds would be paid by issuer countries.

79. **What is the rationale?** One economic problem faced when investing in biodiversity conservation (and in many other environmental activities) is that today's investment will deliver

benefits way into the future. Due to a positive economic time preference, the further in the future is the benefit, the less valuable it is to today's tax payers (positive discount rate). It seems fair, then, that future generations pay for part of today's investment in BC that will deliver irreplaceable values for future generations to enjoy.

80. **How would it be different from the current situation?** Currently, governments borrow in the national and international markets to invest in infrastructure and other long term services and there are some cases where bond moneys may have been used to pay for protected areas' infrastructure. But there is no precedent for an international green bond, or for that mater for an international development bond.

81. **Background, support** The International Financial Facility, proposed in 2003 by the UK and endorsed by France (and already mentioned in the section on joint implementation) included issuing bonds to borrow money from international capital markets, against the long term commitment of donor countries, to increase resources available in the initial years, so as to achieve the 2015 MDG (see Mavrotas, 2005)

82. **Pros and cons**

The pros of a green bond are (a) it has no or very low initial costs for participant countries; (b) both developed and developing countries could issue the bonds, for instance in proportion to each country's current GDP, (c) beyond low risk buyers, a green bond could also attract environmentally conscious investors.

The cons may include (a) that it has never been tried before; (b) reluctance of countries to get indebted for the sake of the environment.

83. **What needs to happen in the short run?** Conditions here are similar to those mentioned for the joint implementation mechanism. The best short-term scenario would be a few high-income and developing countries stepping forward and committing to issuing a green bond for several million euros or dollars.

If there are no countries willing to press ahead, a more modest goal could be to secure support to bring together a group of high-income and developing countries representatives, plus brokers and financial experts to discuss the idea and come up with a more detailed proposal on how it could/should be done (e.g. a stand alone green bond or as part of a development bond to achieve the MDG?).

84. **In the long run** The best long run scenario is that the green bond proposal is adopted by the international community, either as a specific green bond for achieving the goals of the CBD or as a part of an international bond for achieving the MDG and/or finance the provision of other global commons.

3.2.3. Auctioning or Selling Part of the Carbon Emission Permits and Other Cap-and-Trade Permits

85. **What is it?** The EU, and other countries that participate in the cap-and-trade carbon market, would auction part of the carbon emission permits that are currently distributed to industries and use part of the money raised to pay for global biodiversity conservation, either by transferring these resources to a multilateral fund or through bilateral cooperation.

86. **What is the rationale?** The idea of taxing activities that consume, pollute or otherwise

damage the global environment to raise money to pay for global public goods, including biodiversity, has been suggested several times in the past. In this regard, auctioning a percentage of the carbon permits now distributed for free and using the revenues to pay for environmental conservation is a straightforward application of the polluter pays principle.

87. **How would it be different from the current situation?** Currently, almost all permits in cap-and-trade schemes are distributed for free (grandfathering), but the alternative of auctioning all or part of them has been well researched and tried in a few cases. The grandfathering and the auction approach would have the same pollution control effect and the same economic efficiency outcome. The difference would be that some of the benefits that in the grandfathering approach accrue to private sellers would accrue to the government selling agency in the auctioning approach.

88. **Background and support** At a 2007 meeting of the environment minister of G8 countries, the German representative proposed the auctioning of 10 % of the CO₂ permits of the European emissions trading scheme with 50 % of the revenues to be used to combat climate change and the other 50 % to halt biodiversity loss. Based on recent market prices, auctioning 10% of the German permits alone could raise 300 Million euros.

89. **Pros and cons**

Pros: (a) carbon permits already exist, they are already being traded, and the market is huge; (b) the auction scheme may not face the resistance that a new tax may face, and even if only a small portion of the permits are auctioned, it may raise considerable revenues.

Cons: (a) industries may resent having to pay for what they have received for free.

90. **What needs to happen in the short run?** All that would be needed is for a few countries, or the EU, to adopt the German proposal or a variant of it.

91. **In the long run** With governments considering cap-and-trade approaches for many environmental fields (air pollution, water pollution, wetlands, biodiversity, etc), the best long run scenario would be that the partial auctioning approach is adopted by the international community, and included in existing and future MEAs and their protocols.

3.3. Some Innovative Financial Mechanisms to Increase International Financing from Voluntary Sources

92. Voluntary sources of financing – from NGOs, Foundations, households and businesses are anything but new. Still, a lot of innovations are being tried here. For example conservation NGOs are experimenting with many innovative fundraising mechanisms, some based in new technologies (round ups) some in importing financial mechanisms that have been successfully tried in other areas of national and international cooperation (e.g. sister parks; adopt a park; NGOs-businesses partnerships and more). Here we look in detail into two of these innovative financing mechanism, charity lotteries, and dedicated funds.

3.3.1. A Multinational Green Lottery

93. **What is it?** Green lotteries are international charity lotteries that raise funds to invest in international biodiversity conservation. Several approaches could be pursued:

- The CBD alone, or in partnership with other international conventions, international agencies and NGOs may be able to garner support for an international charity lottery

from a start up group of countries. National governments would be called to authorize the selling of such a lottery in their territory, and grant it a favorable tax treatment.

- If an international charity lottery proves to be too difficult to put in place, a network of country charity lotteries could also do the job. For example, the Netherlands Charity Lottery has already helped NGOs in several countries interested in duplicating the Dutch experience.
- Also an internet based global green lottery may simplify many of the legal hurdles faced by the traditional lottery approaches.
- Another option could be a broader global charity lottery distributing benefits for several global causes, among them biodiversity conservation.

94. **What is the rationale?** There are many reasons why a green lottery is an attractive financial mechanism for BC. It is a strictly voluntary source of funds. It is a renewable source, available year after year. The benefits come with no strings attached and could be used for a wide variety of conservation purposes and in ways fully consistent with international social and environmental standards. Last but not least, even in the most conservative estimates the amounts that could be raised are significant.

95. **How would it be different from the current situation?** Lotteries have been a fixture in human society for millennia, and in the last century governments have routinely earmarked some portion of lotteries' revenues to pay for highly visible social expenditures like education, health and, more recently, environmental conservation. There are examples of private charity lotteries dating back to the sixteenth century. Private charity lotteries, namely private not-for-profit lotteries whose sole purpose is to raise funds for civil organizations, have been growing in recent years, particularly in Europe where the Netherlands is the star case, with a consortium of three charity lotteries distributing 300 million Euros among Dutch civil society organizations in 2006.

96. Most current private charity lotteries are of a national or sub-national scale and their benefits are often distributed to their country's civil society organizations (CSOs). Some CSOs (e.g. Oxfam and WWF in the Netherlands) have a strong international reach, meaning that a portion of the funds they receive support social and environmental programs around the world. The differences between the current charity lotteries and the present proposal are: scale (from national to multinational) and focus (from general to biodiversity).

97. **Background and support** There is considerable interest in using charity lotteries as a way to raise funds for the MDGs in general and for biodiversity conservation in particular. In 2004, the president of Finland proposed such a global lottery at Monterrey's United Nations Financing for Development Conference, and the idea has since been picked up by many international forums and development experts.

98. **Pros and cons.** Among the pros: (a) it is a voluntary financing mechanism, no government expenses or new taxes involved; (b) it could raise considerable amounts of money, considering that lottery sales in 2001 were over 125 billion dollars (Addison and Chowdhury, 2005). If a Green lottery could take up 2% of the market and keep 50% of the sales for BC investments, that would amount to 1.25 billion dollars a year; (c) biodiversity conservation can motivate new lottery buyers delivering more than money.

Among the cons: (a) some environmental stakeholders may consider lotteries, or gambling, a non-ethical way to pay for conservation; (b) there is increasing competition in the lottery field; (c) in some countries lotteries are a local government monopoly and in all countries the field is heavily regulated, so that any new scheme will have to negotiate many legal hurdles.

99. **What needs to happen in the short run?** All that may be needed in the short run is that some CBD parties and governments endorse the idea, and put some start up resources for the design and development. The actual design and development of the lottery could be commissioned to existing charity lotteries and one or several conservation NGOs.

100. **In the long run** In the long term, the best case scenario would be that (a) more countries allow the lottery in their territory; (b) countries give the lottery a tax exempt status; and (c) the lottery is able to gain a significant portion of the market.

3.3.2. International Biodiversity Funds Based on Business and Private Contributions

101. **What is it?** One more international biodiversity fund that is capitalized by large businesses and private contributions

102. **What is the rationale?** In recent years, several issue specific international funds have emerged (e.g. to fight HIV), capitalized by large businesses and private donations. They are the outcome of two factors (a) an issue that galvanize the world community; and (b) the emergency of large private donors that want to play an active role in the use of their donation. Protecting the world biodiversity can become one such issue too.

103. **How would it be different from the current situation?** Currently the GEF is the only international fund for biodiversity conservation; but it is based on countries contributions. On the other hand there are many private environmental funds, but they are small scale, national or regionally focused, and mostly dependant on public moneys. It can be argued that currently conservation NGOs and some foundations already do the job, since they receive donations from private sources and use them to support biodiversity conservation worldwide (e.g. WWF). The potential of the international fund proposed here would be its ability to attract large donors that may not be reached by existing NGOs fundraising mechanisms.

104. **Pros and cons.** Among the pros: (a) it is a voluntary financing mechanism, no government expenses or new taxes involved; and (b) it could raise considerable amounts of money.

Among the cons: (a) it heavily depends on succeeding in attracting the attention a few big donors to start up the process; (b) it could compete with the fundraising of existing NGOs; (c) beneficiaries may resent too much activism from such a fund.

105. **What needs to happen in the short run?** The initial steps of such fund include (a) drafting the fund bylaws; and (b) finding a champion of international stature to fundraise for it. The actual design and operation of the fund will probably have to be negotiated with the initial contributors to it.

106. **In the long run** In the long term, the best case scenario would be that the fund is established as a successful and efficient mechanism to deliver biodiversity and social improvements, hence increasing its potential to attract donations

3.4. Some Innovative Financial Mechanisms to Increase International Financing from Businesses and Markets

107. Markets for biodiversity friendly goods and services have great potential to support

biodiversity conservation, mostly in productive landscapes and, to a lesser degree, in buffer zones and protected areas. Still it is important to recall that in most cases market based conservation:

- Is a long-term process, not a direct fundraising mechanism.
- It requires significant developments both in the supply and demand side
- It may require spending considerable funds before it begins to pay back.
- The size of the market is not always a good indicator of the money that will actually go back to the rural supplier, let alone the money that will actually be invested in biodiversity conservation.
- Guided by demand and supply, funds may or may not end supporting conservation in priority areas.

3.4.1. Foster International Markets for Regulated Bio-Carbon Offsets

108. **What is it?** Interested parties both in the biodiversity and the climate change field encourage the growth of an international market for developing countries' bio-carbon from biodiversity friendly reforestation, agro-forestry and avoided deforestation.

109. **What is the rationale?** There are good opportunities to increase financing for biodiversity conservation in developing countries through the sale of bio-carbon offsets. This is contingent, however, on the emerging international markets for bio-carbon becoming biodiversity friendly. In some cases – e.g. avoiding deforestation of natural forests—it may be a win-win alternative where biodiversity conservation adds no cost to the carbon sequestration costs. In other cases –e.g. reforestation projects- the additional costs of doing it in a biodiversity friendly way may be low, and there may be buyers or funders willing to step in to cover those extra costs.

110. **How would it be different from the current situation?** Following the Kyoto Protocol, world carbon trading is already big, amounting to some \$22 billion in 2006. In that big total the share of bio-carbon --mostly reforestation-- is small, some \$100 million a year, and only part of it has gone to developing countries. But things are changing fast, and bio-carbon markets are expected to grow to some \$1.5 billion in the next decade, and then keep growing. This may open significant opportunities to mainstream biodiversity in production landscapes of developing countries, through bio-carbon payments for biodiversity friendly reforestation and agro-forestry. If reduced emissions from deforestation and forest degradation (REDD) make it to the post Kyoto negotiations, the bio-carbon market may also become a financial source for protected areas and native forests in developing countries.

111. **Background and support** This is a development supported by many stakeholders --the GEF, the World Bank, many donors, many developing countries and more. But on the ground deals have been few, hampered by issues of measurement, permanence and leakages in the supply side and a preference to go for more straightforward industrial emission reduction deals in the demand side.

112. **Pros and cons.** Among the pros (a) there is a lot of support for the idea of forest conservation as a way to jointly deliver carbon sequestration and biodiversity; (b) there is strong probability that the post-Kyoto arrangements will include REDD; (c) moneys can be significant (Richard and Jenkins, 2007 quote revenues of 2.35 billion dollars per year for a reduction of 10% in deforestation rates at 10 dollars per ton of CO₂).

Among the cons: (a) thus far measurement and monitoring problems have bogged down the regulated bio-carbon market; (b) biodiversity friendly bio-carbon offsets may be more costly than

other carbon sequestration activities, requiring additional biodiversity buyers to make up for the difference; (c) funds may accrue to sellers in areas of little biodiversity value.

113. **What needs to happen in the short run?** Among others: (a) the CBD could indicate to the Climate Change Convention its strong support for REDD and for the promotion of biodiversity friendly bio-carbon initiatives; (b) the CBD, its parties and the GEF could support the development of methods, standards and best practices that support the growth of such markets; (c) the CBD its parties and the GEF could encourage and support developing countries' conservation agencies in the preparation of biodiversity-friendly bio-carbon offset projects that are able to attract buyers in the regulated carbon offset market; (d) the CBD, its parties and the GEF could encourage, where appropriate, the growth of private sector driven markets for biodiversity-friendly bio-carbon offsets.

114. **In the long run** In the long run this, as any other market, should grow as demand and supply grow. Still, there could be an important role for the CBD to promote standards and regulatory frameworks that increase the biodiversity pay off of the market and also secure the rights and livelihoods of local communities.

3.4.2. Foster International Markets for Voluntary Bio-Carbon and Biodiversity Offsets

115. **What is it?** Interested parties in the biodiversity and climate change field and in businesses encourage the growth of international voluntary markets for high quality bio-carbon, and biodiversity offsets targeting the demand of businesses, households and conservationists.

116. **What is the rationale?** In parallel to the CCC Kyoto Protocol, there is a growing voluntary carbon offset market (USA). There are good reasons to believe that this voluntary market will keep growing fuelled by the demand of non-regulated businesses sources and by the demand of environmental conscious households. Voluntary markets can be especially appropriate to attract "carbon-plus" buyers, willing to pay a premium for carbon sequestration that also provides high biodiversity conservation and adheres to social equity standards.

117. Together with the voluntary bio-carbon market there is a small but growing voluntary market for biodiversity offsets. In some cases, businesses are investing in biodiversity protection or restoration as a way to voluntarily compensate for the ecological impact of their activities above and beyond regulations, or to gain social support for their operations. Other sources of demand are concerned households that want to compensate for their ecological footprint.

118. **How would it be different from the current situation?** Thus far, the voluntary bio-carbon market in developing countries is small and major buyers have been the same country governments (Costa Rica, Mexico, China), international agencies and donors (GEF, World Bank, Nordic Countries) and to a lesser degree NGOs and businesses. Lately there has been an explosion of private companies offering carbon offsets to high-income countries' households, a few of which assert that the offsets they sell are in the form of forest plantations in developing countries. But the market is far from transparent and the biodiversity impact of these initiatives is far from clear.

This proposal would address several of the above limitations by supporting the growth of high-quality voluntary bio-carbon and biodiversity offset markets that are capable of delivering significant biodiversity conservation gains, and that foster the supply from developing countries and the demand from environmentally conscious businesses, households and conservationists of developed countries.

119. **Background and Support** Voluntary markets for carbon offsets, and to a lesser degree biodiversity offsets, are a recent concept spurred by, among others by, (a) businesses interest in countries that have not signed the Kyoto Protocol; (b) past experiences with cap-and-trade regulations; (c) growing interest in market based approaches to conservation, and (e) society's growing concern for the state of the environment.

120. **Pros and cons.** Among the pros: (a) because they are voluntary these markets should work to the satisfaction of all parties; (b) voluntary markets can create a demand before a regulation driven demand kicks in (businesses demand for offsets) or where no regulation is foreseen (e.g. households' demand). Among the cons: (a) voluntary arrangements may close the way to more effective or more stringent regulations; (b) size or prices may remain low, compared to regulated markets.

121. **What needs to happen in the short run?** Among others: (a) the CBD, its parties and the GEF could support the development of standards for the voluntary markets, support education and communication among potential buyers and sellers as well as programs to direct the voluntary demand of environmental offsets towards high biodiversity value projects in developing countries; (b) the CBD, its parties and the GEF could encourage and support developing countries' conservation agencies and other local conservation stakeholders in the preparation of biodiversity-friendly bio-carbon and biodiversity offset projects that are able to attract buyers in the voluntary offset market of high-income countries; (c) the CBD, its parties and the GEF should work with NGOs and business to encourage, where appropriate, the growth of private sector demand and supply of voluntary biodiversity-friendly bio-carbon and biodiversity offsets.

122. **In the long run** In the long run this, as any other market, should grow as demand and supply grow. Still, there could be an important long term role for the CBD and the CBD parties in partnership with relevant stakeholders to (a) promote standards that increase the biodiversity pay off of the markets for voluntary offsets, (b) secure the rights and livelihoods of local communities; and (c) educate and increases public awareness and demand.

3.4.3. Foster International Green Markets (Including Eco-labeling, Markets for Sustainable Products and for Ecosystem Friendly Products)

123. **What is it?** Major stakeholders, both in the biodiversity conservation field, the agricultural development field and the food and fibers businesses, collaborate in an array of initiatives to increase the biodiversity conservation return of green markets.

124. **What is the rationale?** With global sales of organic food at about \$USD30 billion in 2005 and 100 million hectares of sustainably certified forest, markets for green, organic, and sustainably produced food and fibers may become the largest source of financing for mainstreaming biodiversity conservation into production landscapes. Each time consumers pay a premium, such as for fair-trade coffee or certified fish, they are paying for two things: a consumption good (coffee, fish) and a service, namely the assurance that back in the countryside the good has been produced in a way that is environmentally and socially responsible.

125. **How would it be different from the current situation?** Current green markets are transparent neither to buyers nor sellers. In some cases (e.g. certified wood), buyers confront dozens of competitive certification schemes, small producers face steep costs to attain certification or access these new markets, and consumers know very little about what they are

paying for. Also, in most cases little is known about how much of the shelf price goes back to farmers to pay for improved environments and livelihoods. Hence, there is a lot to do to improve green markets' contribution to biodiversity conservation in productive landscapes. A good transparency example has been established by several "fair trade" brands that state in the package the amount of the final price that will go back to the farm.

126. **Background and support** Eco-labeling schemes have been championed by NGOs, (certified wood, certified fish, sustainable soy, etc) and have met increasing business and consumer interest. Certification has grown exponentially in the last 15 years, and still has a large potential to grow, and also a large potential to improve their on-the-ground conservation impact, thus becoming a force for biodiversity conservation in productive landscape. Green markets (including organic, fair trade, and sustainably produced goods) are the other side of the eco-labeling coin, and they command a small but fast-growing share of the world's food and fibers market.

127. How much can green markets become an important source of financing for mainstreaming biodiversity conservation into productive landscapes and seascapes of developing countries? The answer depends largely on developing countries having the opportunity and capacity to produce and export such products. Similarly, international green markets may become an important source of rural jobs and income for the rural poor of developing countries, provided small farmers are able to participate in such markets

128. **Pros and cons.** Among the pros: (a) green markets and eco-labeling are already big; (b) global demographic trends --an increasingly urban, older and richer population—suggests that demand for healthier, more natural (organic) and more environmentally friendly foods and fibers, will continue to grow.

Among the cons: (a) green markets may pay for biodiversity conservation in productive landscapes but would contribute little to finance strict protected areas; (b) market driven mechanisms are difficult to direct to support specific areas of high biodiversity value.

129. **What needs to happen in the short run?** Among others: (a) the CBD, its parties, the GEF, NGOs, food, agriculture and development agencies (e.g. FAO, IFAD, UNDP) could partner with business and consumer associations to (a) Increase consumers' awareness and willingness to pay for green products in high and middle income countries markets; (b) Increase businesses' interest and knowledge of the potential of green markets; (c) Improve eco-labeling and certification schemes to make them more transparent to consumers and producers and ensure that they do promote biodiversity conservation back at the farm; (d) Improve access to high-income markets for developing countries' green, organic, fair trade and sustainable products; (e) Help small farmers in developing countries seize the green market opportunities; (f) Improve mechanisms to ensure that a portion of the price actually goes back to the field to pay for improved environments and livelihoods (for example some fair trade labels specifically mention what portion of the final consumer price will go back to the farmer)

130. **In the long run** The CBD, the CBD parties conservation NGOs and relevant stakeholders could have an important role in helping this market grow by working to (a) increase awareness among consumers; (b) support best practices among producers and traders; (c) monitor the biodiversity and livelihood benefits of green markets and certification schemes

4. Innovative Financial Mechanisms. What Would it Take to Start Using Them?

4.1. Who Decides on Financial Mechanisms for Biodiversity Conservation?

131. Currently international financing for BC is a highly decentralized process, both regarding the financial instruments used, and the financing decisions. Some multilateral environmental agreements --the UN Climate Change Convention and the UN Convention on the Protection of the Ozone Layer come to mind—include in their convention or its protocols a precise list of financial mechanisms that guide the majority of the investments in their area of concern. That has not been the case of the CBD. After appointing the GEF as the financial mechanism of the Convention, the CBD has had many discussions on financing but little has transpired from them.¹⁸ By what means, and how much to finance global biodiversity conservation is currently the result of individual decisions by many stakeholders, including government spending in their own countries, bilateral aid, donor countries pledges to the GEF, conservation NGOs, development banks, other international agencies and more. Some discussion and co-ordination takes place, but to a larger extent each funder decides on its own how, how much, and where to finance biodiversity conservation.

132. In the above context, any proposal on “Innovative International Financial Mechanisms to Achieve the Goals of the CBD Program of Work on Protected Areas” needs to acknowledge that the CBD is not a financing agency, and that the challenge is how to use the CBD system to bring the discussion to the real finance decision makers. The present document is addressed to the COP9 of the CBD, in the belief that the CBD could play a more pro-active role in the financing for biodiversity conservation discussion, by fostering innovations and brokering new commitments. For example

- The CBD directly or through the GEF could call key donor and key recipient countries to a discussion and adoption of all or some of FM here discussed.
- The CBD directly or through the GEF could give technical support to countries or other conservation stakeholders willing to develop and adopt some of the financial instruments here discussed.
- The CBD directly or through the GEF could work with key NGOs and businesses to foster the development and adoption of some of the financial instruments here discussed.
- The CBD directly or through the GEF could bring the issue of financing for BC to international forums where financing for development and financing for the environment are being discussed
- The CBD through its organs or through the GEF could reach out to other multilateral agreement agencies and forums to develop synergy opportunities

4.2. Institutional Arrangements to Promote Innovative Financial Mechanisms

133. The experience of the last 15 years is clear, without an “institutional push” many

¹⁸ Each one, the CBD and the GEF, have their own decision bodies; the CBD’s COP and the GEF’s Council. Although the same countries made up the COP and the Council; the representation and the representatives are not the same, and looking to both organizations bylaws and proceedings there is no clear evidence that the GEF Council is legally bind to follow the CBD recommendations. Moreover several GEF staffs have pointed to the authors of this document that since the CBD tends to ask for everything, it makes it easy for the GEF to press ahead with its own agenda confident that whatever it does will allways be in line with some CBD proposal.

innovative financial mechanisms will never happen, and the progress of others will be much slower.

The GEF, which operates the Convention's financial mechanisms, has an obvious role to play in this "institutional push", but, many of the innovative financial mechanisms discussed in this document and elsewhere fall outside of the GEF's mandate. Thus, ad-hoc institutional arrangement may be needed to move from ideas to implementation; and, a champion willing to commit start-up financial support will be needed, too.

134. A small financial innovation task-force -- that could be located in the orbit of the CBD Secretariat, one of the CBD working groups, or hosted by a donor willing to step in-- plus periodical meetings of a larger group of stakeholders may be needed too. The function of the task force and the meetings would be to keep-up the technical and policy momentum; network with the CBD parties, the CBD organs and financial mechanisms; and engage key donor countries, NGOs, businesses and other relevant stakeholders with the goal of brokering commitments and accelerating the development, deployment and scaling-up of innovative financial mechanisms. Reporting on advances to the COP and the conservation community will also be a responsibility of this task force.

135. Last but not least, recent experience (the Jacques Chirac air travel tax in France, Gordon Brown International Finance Facility, Bill Gates focus in international health) show that innovating on BC financing may well needs one or more high visibility champions; political figures or international personalities that can bring world attention to biodiversity conservation financing, and engage key donor countries, NGOs, businesses and other relevant stakeholders with the goal of brokering commitments.

4.3. Improving the Supply of Biodiversity Conservation Programs

136. In a global arena where many pressing issues compete for attention and funds, the conservation movement cannot expect that innovative financial mechanisms will simply "happen." To the contrary, significant efforts would be required to (a) make the BC supply more attractive; (b) to better mainstreaming biodiversity conservation into the environment and development agenda; and (c) to improve information dissemination and education among major stakeholders and the public at large.

4.3.1. Better Conservation Can Attract More Funding

137. Most people in the conservation field acknowledge that there is much to be done in term of design and implementation of biodiversity conservation projects, which are routinely criticized for a lack of baseline data, targets, milestones, monitoring and evaluation (Ferraro and Patannayak, 2006). Improvements have been made in the past with support from UNEP, IUCN, the GEF and CBD organs; but more is needed regarding (a) project quality: how projects are designed, implemented and monitored; (b) the time it takes for the funds to actually be put to work (for example, projects in the GEF may take up to 5 years to be approved); and (c) how scarce funds are assigned. Some proposals to enhance current practices include:

- Improvements to projects' quality: Encourage conservation project developers and funders to adopt (or demand) higher standards and best practices in project design and implementation, particularly in terms of identifying clear qualitative and quantitative goals and milestones, baseline data, implementation strategies, and monitoring and evaluation procedures. Actually there is no dearth of guidelines and manuals, but on-the ground use lags way behind (see

relevant guidelines among others in (a) the technical organs of the CBD (e.g. the Working Group on Protected Areas and the SBBSTTA (<http://www.cbd.int>); the IUCN Protected Area Program (www.iucn.org); the GEF projects monitoring and evaluation standards (www.thegef.org). Additionally, the CBD may want to consider endorsing a set of “CBD standards” to assess and track conservation projects (provided that this does not demand protracted negotiations).

- Creating a portfolio of readily available, high quality project proposals Instead of the current situation where funds wait years, and some times go unused for lack of good projects, the CBD could encourage some of its members or related institutions and partners (GEF, IUCN, a consortium of NGOs, a group of willing countries) to invest in a “golden portfolio” program that would coach developing countries PA agencies in the preparation of a high-quality ready to be financed projects. To become part of this “golden portfolio” projects could be volunteered by interested parties (countries and other BC stakeholders) pretty much the way the UNESCO World Heritage program works (<http://whc.unesco.org>) The key innovation would be that the Golden Portfolio Program would have resources to help develop projects into top quality project proposals, as well as to help market them among potential donors. We could envisage one overarching portfolio or several thematic portfolios, each with a different focus (e.g. only PA, or PA + BZ, or Biodiversity Conservation plus other MDG, etc.).
- Improvements in fund management. Environmental funds have been praised as an efficient way to manage biodiversity conservation funds. A variety of funds exist from which to choose, including local, country and international level funds managed either by NGOs, governments or international agencies (GEF). The main pro of these funds is that they manage a significant amount of resources and are fully dedicated to tracking the environmental projects they support. This differs from international donors, who usually lack the time, staff or expertise to do so. There are cons as well: donors may be reluctant to freeze large sums of moneys in a third party fund, or the fund management may be quite bureaucratic and cumbersome.

“Donor funds” are an intermediate alternative, quite common in the development arena, although not so much in the BC field. For example, at the World Bank headquarters several wealthy countries have put up funds to support specific activities (e.g., water and sanitation or education or rural development). The donor country controls the fund’s purpose, decides on the fund replenishment; and -- usually through one or two designated staff at the WB headquarters -- review and approves proposals. The World Bank staff present project proposals to the funds, in some cases manage the grants or, in others, act as the quality control for proposals from the field. International conservation NGOs could be the recipients of similar Donor funds.

- Improvements in awarding funds: The fund granting agencies (e.g. the GEF, the bilateral development agencies, and also the country authorities that assign their funds and international funds to specific project and local level activities) could adopt innovative granting mechanisms designed to reduce conservation costs without compromising social equity and environmental goals. For example, reverse auction have been successfully used in Australia and the US to buy ecosystem services from farmers, and have been tested also in developing countries (Brazil). Also, better project quality at entrance (discussed above) can reduce the time and cost of project selection and free resources to use in much needed monitoring and evaluation.

- Taking risks: Improving the quality of biodiversity conservation requires also testing innovative ideas and approaches. Fund granting agencies (GEF, bilateral donor agencies) should not shy away of a of supporting a modicum of ‘learning-by-doing’ projects, and should encourage candid evaluations and frank reporting of what is/is not working and why sop as to ensure learning.

4.3.2. Integrate BC with Other Environmental and Development Goals

138. There is room and need to fundraise for stand-alone biodiversity conservation projects. But, to achieve the CBD goals, let alone to achieve sustainable development world wide, more often than not biodiversity conservation may need to be part of multipurpose projects and programs.

139. Some conditions to successfully integrate biodiversity conservation into economic and social development projects include (a) demonstrating that integrating BC in social or economic development projects is more cost effective and/or more socially acceptable than each project pursuing its singular objective; (b) having clear goals and targets for the biodiversity conservation component and being able to measure and monitor them through the project; and (c) understanding and agreeing on what are the costs of pursuing the different goals and who would pay for what. If these conditions are met, building a portfolio of biodiversity projects that piggy back on other environmental, social and economic programs may be an important way to reduce costs and boost the appeal of investing in biodiversity conservation. Such a mix may include:

- Mainstreaming BC into national and international development agendas: This has been a call from many quarters for some years now, not least from donors that want assurance that demands for BC funds are country-driven and are integrated in the overall country development strategy. Such integration will neither be achieved by general statements such as “conservation is good for development” or by sprinkling development plans and poverty reductions plans (PRSP) with the word “biodiversity.” What is called for is an effort to integrate BC at the same level of details as the other components of the development agenda under discussion. Namely if the development agenda is at the level goals, targets, milestones, sectors, or programs, the BC component needs to be mainstreamed at the same level of goals, targets, milestones, sectors or programs. That is easier said than done and the BC stakeholders (e.g. national conservation agencies, NGOs, etc) need to be able to estimate and explain the additional costs and benefits pf mainstreaming BC, the costs of inaction, the trade-offs, and how costs, benefits and trade-offs could be distributed. In most developing countries, conservation agencies and other conservation stakeholders are ill prepared for this task. Hence this is an area where the CBD technical organs, some of the CBD parties and partners should step in, since modest investments in manuals, best practices, capacity building and pilot examples, would have an important pay off.

Mainstreaming biodiversity conservation into national and international development agendas should be seen as a two-way road: it is about taking full advantage of BC as a source of social and economic development; but it is also about taking full advantage of social and economic development opportunities to improve biodiversity conservation, and box 6 present a good example of South Africa mainstreaming BC into poverty alleviation programs.

- Biodiversity conservation + carbon projects: As already mentioned in Chapters 2 and 3, there are great expectations and a lot of activity around piggy-backing biodiversity conservation into bio-carbon projects. In particular, agro-forestry can provide a way to increase

biodiversity in agriculture landscapes, and AD and REDD can supply new sources of funds for the management of protected areas and other native forests.

- Biodiversity conservation + poverty reduction projects: A lot is usually said about BC's ability to help reduce poverty, but there is nothing automatic here and documented successes are scarce. The boxes on Namibia's Conservancies and on South Africa's Working for Wetlands programs show two success stories with clear lessons regarding potentials and limitations. For example (a) that tourism, sustainable agriculture production, and more recent PES, all of them create income opportunities from BC, but how and how much changes from case to case; (b) that ecosystem restoration is a large, but temporary, source of employment and incomes; etc. Although success are always site specific, there is room here for collating best practices and developing manuals or standards to help developing country practitioners.
- Biodiversity conservation + other MDGs: There are opportunities to associate BC and other MDGs, particularly in the area of gender equity and empowerment of women, since in many rural areas of developing countries women play a critical role in natural resource management and also suffer the most from environmental deterioration (e.g. fire-wood or water scarcity, in-door air pollution due to the use of firewood, etc).

Box 6. Mainstreaming Biodiversity Conservation into National Development Programs. South Africa's "Working for Wetlands" Experience

Mainstreaming biodiversity conservation into national development programs and particularly into poverty alleviation programs (PRSPs) should be a two-way street: biodiversity conservation helping development and poverty alleviation; but also development and poverty alleviation helping biodiversity conservation. While Namibia's conservancies are a good example of the former (see Box 3), South Africa's Working for Wetlands Program is a good example of the latter.

To address unemployment rates of 40% and over 10% of the population below the poverty line, the South African government has developed numerous initiatives, among them the South Africa Poverty Alleviation Fund (SPAF) that uses its budget to create jobs, training, etc. Usually, this kind of program would pay for jobs in road construction and other such infrastructure projects. But together with this traditional approach, the SAPAF decided to invest in "environmental infrastructure" and between 2000 and 2007 gave 60 million dollars to the Working for Wetlands Program to invest in labor-intensive wetland restoration. In seven years, the Working for Wetlands programs has:

- Restored 10,000 h. of wetland per year, improving water security in a water scarce country.
- Created 2,000 full time jobs per year.
- Focused on the poorest of the poor: recruiting among youth, women, single parent families, and families with an HIV infected member.
- Devoted at least 10% of the work time to training and skills development for the job market.
- Increased self-esteem and confidence and reduced vulnerability through increased food security among participants.

Working for Wetlands has also developed innovative management approaches to ensure that people deliver (e.g. work- brigades with task related payments) and do not overstay (2-3 year

time limit, salaries below market minimum), and the model has successfully been used in South Africa for other natural resource management programs, including eradication of invasive alien plants, community based natural resource management, combating desertification and tourism infrastructure development.

The experience of South Africa's Working for Wetlands shows that (a) ecosystem restoration can be a labor-intensive pro-poor investment that delivers both biodiversity conservation and poverty alleviation; (b) that long term funds commitment and skillful project design are necessary to succeed. Still, it is a short term source of jobs, lasting until the restoration is completed and/or the funds are exhausted.

Source: www.wetlands.org.za, and personal communication with the program team

4.3.3. Improving Information and Education Among Major Stakeholders and the Public at Large

140. There is a paradox in current society's awareness of biodiversity issues. On the one hand, television, movies, magazines and the internet are all full of messages and images regarding the plight of the environment and its charismatic species. Any urban dweller can talk about the polar bear losing habitat, the tropical forest being depleted, elephants being poached for ivory, etc. On the other hand, the public knows very little about what it would take to conserve biodiversity. Outside the CBD, few know what the 2010 goals are, let alone why it is important to achieve them or who should pay for them. It follows that the conservation community needs to invest in more compelling messages, better communication, and more information campaigns so as to increase public awareness of biodiversity conservation and willingness to pay for biodiversity conservation.

141. In this regard, the CBD may want to direct its program of Work on Communication Education and Public Awareness (CEPA) to convene a meeting (or a series of meetings) with communication, marketing and conservation experts to take stock of current communication and education activities in key countries and media and suggest how to make a breakthrough in garnering the interest and willingness to pay from governments, civil society and the private sector. This (or subsequent) meeting(s) could include representatives of major media outlets to discuss their contribution to an awareness campaign to bring the message from the CBD to their audiences.

5. Conclusions and Recommendations

5.1. Conclusions

142. There is consensus in the conservation community that the lack of adequate financing is jeopardizing the achievements of the CBD goals, including the 2010 targets and beyond. Although discussions linger regarding the size of the gap, there is significant evidence that it is large and growing fast. Since the CBD's inception in 1992, the world's protected areas grew by 100% in number and 60% in size, yet in the same period international financing for biodiversity conservation grew only 38%.

143. Increasing both national and international financing is important for biodiversity conservation. But, increasing international financing is critical to the conservation of global biodiversity because a large portion of the world's biodiversity is located in tropical areas of developing countries with insufficient funds to pay for adequate conservation measures. Meanwhile, developed countries with much greater capacity for funding tend to have much less biodiversity within their responsibility. Hence, international financing for global biodiversity conservation fits directly within the "common but differentiated responsibilities" principle, endorsed by the CBD and many other multilateral agreements.

144. In the last 20 years, the international community has given a lot of attention to the search for new or innovative international financial mechanisms to supplement the government, NGO and charity funds that have been the traditional source of international financing for all types of global commons, including global biodiversity. Proposals are numerous, ranging from reforms of the international monetary system, to voluntary mechanisms (e.g. joint implementation, charity lotteries, or voluntary offsets) that may need only the interest of a few parties to get them started.

145. This report discussed the pros and cons of many traditional and innovative international financial mechanisms, from ODA to green markets, with a particular focus on financial mechanisms for the financing of protected areas, and concludes that:

- Even if there is currently little chance of implementing the more general mechanisms proposed in support of the global commons (e.g. international taxes, new systems of international reserves, etc), keeping the discussion alive is important at least for three reasons. First, because the rationale and the need for such proposals still exist. Second, because what today seems improbable, may look more attainable in the future (in part thanks to having kept the discussion alive). And third, because some of these schemes, while not ripe for international approval, may already be attractive to some countries on a voluntary basis or on a regional scale.
- In the short run, there are better opportunities to raise funds for global biodiversity conservation pursuing biodiversity-specific innovative financial mechanisms that mix regulatory, voluntary and market-type initiatives. In Chapter 3, we have put forward a short list of these sorts of financial mechanisms, with the purpose of highlighting options that may have good chances of being picked up by the CBD parties and garner government, business and consumer support (see recommendations below). We acknowledge that this short list is idiosyncratic, and the target – to be acceptable to key stakeholders—is a moving target. So, readers of this report may want look back to the 60+ list of financial mechanisms of Chapter 2 and come up with their own short list of what is feasible in the short run. One way or another, an agreement on a short list of financial mechanisms that the parties to the CBD can

promote during the next 4-6 years is necessary in order to energize a discussion that has been dragging, with meager results, since COP1. Adopting a fundraising target would be useful, too.

- Any innovative financial mechanism, if successful, would supplement but not replace traditional ones. So, a forward looking financial strategy is about innovative financial mechanisms, how to re-invigorate the traditional ones and how to best mix old and new.
- Without an institutional push, many innovative financial mechanisms will never happen and the progress of others will be slow. The GEF, which operates the financial mechanisms of the CBD, is an obvious player here; but, many of the innovative financial mechanisms discussed in this document and elsewhere fall outside of the GEF's mandate and an ad-hoc institutional arrangement may be needed to foster them. A champion willing to commit initial financial support would probably be needed as well.
- To increase the appeal of biodiversity among would-be funders, the conservation community needs to improve its performance in three critical areas: (a) the quality of the conservation programs and projects looking for international funding; (b) mainstreaming and integration of BC with other MDGs; and (c) information and education, targeting major stakeholders and the public at large.

5.2. Recommendations

146. Taking account of the calls from COP 7 and COP 8 to explore new and innovative international financial mechanisms to support the achievement of the objectives of the Convention and the Programme of Work on Protected Areas, and taking account of the forthcoming opportunity to table new proposals in the run up to the COP9, this study proposes that the COP9 of the CBD considers the below recommendation for inclusion in a strategy for resource mobilization to achieve the convention's objectives:

- a) Stating the interest of the CBD to take a more pro active role in fostering financing for BC, directly and/or through the GEF, by, among others (1) participating in the UN discussion on long term solutions to international governance and financing for the global commons, of which global biodiversity is an important part, (2) calling key donor and key recipient countries to a discussion of specific FMs; (3) giving technical support to countries or other conservation stakeholders willing to develop and adopt innovative FM.; (4) working with key NGOs and businesses to foster the development and adoption of some of the financial instruments here discussed; (5) bringing the issue of financing for BC to international forums where financing for development and financing for the environment are discussed; (6) reaching out to other multilateral agreement agencies and forums to develop synergy opportunities.¹⁹
- b) Challenging CBD parties to commit to the development, pilot implementation, adoption and scaling-up of some or all of the following list of promising innovative financing mechanisms for BC, with a special focus on raising resources for the financing of PAs.²⁰
 - Joint-implementation of selected CBD targets;
 - Auction or sale of a part of carbon emission permits and other cap-and-trade permits;

¹⁹ See more details in chapters 2

²⁰ See more details in chapters 3

- Issuing long term “green-bonds;”
 - A multinational green lottery;
 - International biodiversity funds based on business/private contributions
 - Foster international markets for regulated bio-carbon offsets;
 - Foster international markets for voluntary bio-carbon offsets and voluntary biodiversity offsets;
 - Foster international green markets.
- c) Approving specific institutional arrangements, to make sure that the above commitment has the necessary technical resources and momentum to go forward. A small task force, possibly in the orbit of the CBD secretariat or attached to a donor willing to step in, together with periodical meetings of a larger group of stakeholders, may be all that is needed. Their function would be to keep the technical and policy momentum, networking within the CBD, the CBD organs and its financial mechanisms, and engaging key donor countries, NGOs, businesses and other relevant stakeholders to accelerate the development, implementation, and scaling up of innovative financial mechanisms and report on advances to the COP and the conservation community.²¹
- d) Making a call to interested governments, agencies, businesses and NGOs to give core initial support to this endeavor in the form of (1) become public champions for one or more of them; (2) pledging money, (3) technical resources for the institutional mechanisms and (4) expression of commitment to participate in the development of one or more of the innovative financing mechanisms mentioned above.¹⁸
- e) Calling on both sides of the BC financing, namely the fund granting agencies (bilateral aid agencies, the GEF, etc) and the BC fundraisers (developing country PA agencies, conservation NGOs, etc) to improve the quality of conservation through:¹⁸
- Building a portfolio of high quality programs and projects for protected areas, buffer zones and production landscapes that could be readily available to attract international funding.
 - Collating best practices and developing and disseminating manuals or standards for mainstreaming BC international and national development plans in general and into poverty alleviation plans and programs in particular.
 - Building a portfolio of multi-purpose projects where biodiversity goes together with other environmental (e.g. climate change) and MDG goals (e.g. rural women’s livelihoods).
 - Promoting the adoption of internationally acceptable standards to assess and track conservation projects.
 - Developing innovative schemes that reduce time and increase efficiency in the disbursement of funds (e.g. reverse-auctions).
- f) That the CBD direct its program of Work on Communication Education and Public Awareness (CEPA) to invite parties and partners to undertake a world-wide campaign to raise public interest and support for a well defined, highly visible set of biodiversity conservation targets.

²¹ See more details in chapter 4

References

- Anand PB. 2002. Financing the Provision of Global Public Goods. Discussion Paper No. 2002/110, United Nations University, World Institute for Development Economics Research.
- Addison, T. and Chowdhury A. 2005. A Global Lottery and a Global Premium Bond. In Atkinson, A.B. (ed) 2005. *New Sources of Development Finance*. Oxford University Press, New York, pp.156-176
- Addison, T. Matrovas G. and McGillivray M. 2005. *Aid, Debt Relief and New Sources of Finance for Meeting the Millennium Development Goals*. United Nations University, WIDER discussion Paper 2005/09, WIDER, Helsinki, Finland
- Addison, T. Matrovas G. and McGillivray M. 2005. *Development Assistance and Development Finance*. United Nations University, WIDER discussion Paper 2005/23, WIDER, Helsinki, Finland
- Aryeetey, E. 2003 *A Development-focused Allocation of the Special Drawing Rights*. United Nations University, WIDER discussion Paper 2003/3, WIDER, Helsinki, Finland
- Atkinson, A.B. (ed) 2005. *New Sources of Development Finance*. Oxford University Press, New York
- Atkinson, A.B. 2003. *Innovative sources for Development Finance: over-Arching Issues*. United Nations University, WIDER discussion Paper 2003/88, WIDER, Helsinki, Finland
- Balmford, A. et al., 2002. Economic reasons to conserve wild nature. *Science* 297: 950-953.
- Bayon, R et al 2007. *Voluntary Carbon Markets. An International Business guide to What the Are and How They Work*. Earthscan, London
- Bayon, R. et al 2000 *Financing biodiversity conservation*. Inter American Development Bank, Washington DC.
- Bezanson K. and Sagasti F (eds). 2000. *Financing International Public Goods: Challenges, Problems and a Way Forward*. Institute of Development Studies, Sussex, UK.
- Bishop, J.; Kapila, S.; Hicks, F. and Mitchell, P. 2006. *Building Biodiversity Business. Report of a Scoping Study*. Shell International Ltd. and IUCN: London UK.
- CBD. 2007. "Options for Resource Mobilization, Including Innovative Financial Mechanisms, and a Draft Strategy for Resource Mobilization In Support of the Achievement of the Objectives of the Convention." UNEP/CBD/WG-RI/2/4.
- CBD. 2006a. *Financial Resources and Mechanisms (Articles 20 and 21)*. UNEP/CBD/COP/8/INF/1.
- CBD. 2006b. *Progress Towards Implementation of the Convention and its Strategic Plan*. UNEP/CBD/COP/8/INF/8.

CBD. 2005. Options for mobilizing financial resources for the implementation of the programme of work by developing countries and countries with economies in transition. UNEP/CBD/WG-PA/1/3.

Chape, S. et al. 2005. Measuring the extent and effectiveness of protected areas as an indicator for meeting global biodiversity targets. *Phil. Trans. R.Soc. B* (2005) 360 pp.443-455.

Ebeling, J. 2006. Tropical Deforestation and Climate change. Towards an international mitigation strategy. Oxford MSc. Dissertation

Emerton L., Bishop J., and Thomas L. 2006. Sustainable Financing of Protected Areas: A Global Review of Challenges and Options. IUCN.

FAO. 2007. The Global Environmental Facility and Payments for Ecosystem Services. A Review of current initiatives and recommendations for future PES support by GEF and FAO programs. By P. Gutman & S. Davidson, WWF MPO. Report commissioned by FAO for Payments for Ecosystem Services from Agricultural Landscapes- PESAL project, PESAL Papers Series No.1 Rome.

Faust M., Kaul I., Le Goulven K., Ryu G., and Schnupf M. 2001. Global Public Goods: Taking the Concept Forward. Office of Development Studies Discussion Paper Series. UNDP, New York, NY.

Ferraro, P. J. and Pattanayak, S.K. 2006. Money for Nothing? A Call for Empirical Evaluation of Biodiversity Conservation Investments. *PLoS Biology* 4(4) e 105 (0482-0488).

GEF 2006. Annual Report 2005. Fertile Ground: Seeding National Actions for the Global Environment. Washington DC.

GEF. 2007. GEF Focal Area Strategy for Biodiversity (draft). Washington DC.

Gutman, P. (ed.). 2003. "From Goodwill to Payments for Environmental Services: A Survey of Financing Options for sustainable natural Resource Management in Developing Countries" WWF, Washington, DC, USA.

Gutman, P. 2007. Ecosystem services: foundation for a new rural-urban compact. In *Ecological Economics* 62 pp. 383-387

Haq, M et al. (1996) *The Tobin Tax. Coping with Financial Volatility*. Oxford University Press, New York.

James, A., Gaston, K.J. & Balmford, A. 2001. Can we afford to conserve biodiversity?" *Bioscience* 51: 43-52.

James, A., Gaston, K.J. & Balmford, A. 1999. Balancing the Earth's Accounts, *Nature* 401:323-324

Jha, R., 2002. Innovative Sources of Development Finance. United Nations University, WIDER discussion Paper 2002/98, WIDER, Helsinki, Finland

Keynes, J.M. 1942. Proposal for an International Clearing Union. In *The Collected Writings of*

- John Maynard Keynes, vol. 25 pp.168-95, Macmillan, London.
- Kingma S.F. and van Lier T. 2006. The Leeway of Lotteries in the European Union: A Pilot study on the Liberalization of Gambling Markets in the EU. Vrije Universiteit Amsterdam, The Netherlands.
- Koch-Weser, M. and Jacobs, W. 2007 "Financing the Future: Innovative Funding Mechanisms at Work. Terra Media Verlag, Berlin.
- Ladron J., Geisse G., Dufey A., and Borregaard N. 2003. Green Markets: Often A Lost Opportunity For Developing Countries. IISD,CIPMA/RIDES. Paper, 131 pages, copyright: IISD,CIPMA/RIDES Online <http://www.iisd.org/publications/pub.aspx?pno=568>
- Landau, J.-P. (ed) 2004. Rapport à Monsieur Jacques Chirac, Président de la République. Groupe de Travail sur les Nouvelles Contributions Financières Internationales, Paris, France.
- LIFE PLUS Semi-Annual Report No. 5. 2007. Integrated Community Based Natural Resource Management (CBNRM) for Economic Impact, Local Governance and Environmental Sustainability. Windhoek, Namibia
- Mavrotas, G. 2005. The International Finance Facility Proposal. In Atkinson, A.B. (ed) 2005. New Sources of Development Finance. Oxford University Press, New York, pp.110-131
- Miclewright, J. and Wright, A. 2005 A Global Lottery and a Global Premium Bond, In A. Atkinson, A.B. (ed) 2005. New Sources of Development Finance. Oxford University Press, New York, pp.156-176
- Millennium Ecosystem Assessment (2005) Ecosystems and Human Wellbeing. Five Volumes, Island Press, Washington DC.
- Molnar A, et al 2004 Who Conserves the World Forests? Community Drive Strategies to Protect Forests and Respect Rights. Forest Trends, Washington DC
- NACSO (Namibian Association of Community Based Natural Resource Management). 2006. Namibia's communal conservancies: a review of progress and challenges in 2005. NACSO, Windhoek, Namibia.
- Nisanke, M 2003. Revenue Potential of the Currency Transaction Tax for Development Finance. United Nations University, WIDER Discussion Paper 2035/81, WIDER, Helsinki, Finland
- OECD. 2007. Statistic on Biodiversity-Related AID. OECD Paris. Online at www.oecd.org/dac/stats/crs
- Pagiola, S. et al , 2004. Paying for biodiversity Conservation Services in Agricultural Landscapes. The World Bank Environmental Economics Series Paper No 96. World Bank Washington DC
- Paris R. 2006. Aid Targeting the Objectives of the Biodiversity Conventions. Presentation. OECD, Paris.
- Pearce D. W. 2005 Paradoxes in biodiversity Conservation. In World Economics 6-3 pp57-69

Pearce D. W. 2007 Do we really care about Biodiversity? In *Environmental Resource Economics* (2007) 37:313-333

Poats, S. et al 2004. Report on the Latin American Regional workshop on “Compensations for Environmental Services and Poverty Alleviation in Latin America.” Quito, Ecuador. April 26-28 2006. Grupo RISAS, Quito

Rapport Quadripartite, 2004. Report of the Technical Group on Innovative Financing Mechanisms, 2004. Online: <http://www.diplomatie.gouv.fr/actual/pdf/Reportfieng.pdf>.

Richards, M. and Jenkins, M. 2007. Policy Options for Innovative Financing of Sustainable Forest Management. *Forest Trends*, Washington DC.

Rodrik, D. 2006. The Social Cost of Foreign Exchange Reserves. National Bureau of Economic Research, Working Paper 11952, Cambridge, USA.

Samuelson, P. 1954. The Pure Theory of Public Expenditure. *Review of Economics and Statistics*, 36, 387-9.

Soros, G. 2002. *George Soros On Globalization*. Public Affairs, New York.

Stiglitz, J. E. 2006a. *Making Globalization Work*” W.W. Norton & Company, New York.

Stiglitz, J.E. 2006b. Global Public Goods and Global Finance: Does Global Governance Ensure that the Global Public Interest is Served? In Touffut J.P. (ed.) *Advancing Public Goods*, Edward Elgar, Cheltenham, UK.

Touffout J.P. (ed.). 2006. *Advancing Public Goods*. The Cournot Centre for Economic Studies Series. Edward Elgar, Cheltenham, UK.

United Nations. 2001a Preparatory Committee for the International Conference on Financing for Development. Technical note No. 3 Existing proposals for innovative sources of finance. A/Ac.257/27/Add.3.

United Nations. 2001b. Report of the High-Level Panel on Financing for Development (the Zedillo Report) UN, New York. A/15/1000.

Vreugdenhil, D. 2003 *Protected Areas Management: Biodiversity Needs and Socioeconomic Integration*. WICE, <http://www.wice.ws/>

Verweij, P.A. and de Man M. 2005. *We Can Not Afford More Biodiversity Loss: The urgency of protected area financing*. Report, Greenpeace International, Amsterdam, the Netherlands.

Weaver J. (ed) et al. 2003. *Debating the Tobin Tax: New Rules for Global Finance*. New Rules for Global Finance Coalition, Washington DC.

World Bank. 2005. *Annual Report*. World Bank, Washington DC.

World Bank. 2006. *Mountains to Reefs. The World Bank and Biodiversity 1988-2005*. World Bank, Washington DC.

WRI. 2003 World Resources 2002-2004. World Resources Institute. Washington DC.

Wunder, S. 2005. Payments for Environmental Services: Some Nuts and Bolts. CIFOR Occasional Paper No. 42. CIFOR, Bogor, Indonesia.

WWF. 2006. Living Planet Report 2006. WWF, Gland, Switzerland.

Annex 1

Innovative Financial Mechanisms Proposed in the Last Decade

Below we have reproduced 12 lists of innovative financial mechanisms proposed in the last decade. Their purpose varies; some of them focus on financing for biodiversity conservation (CBD, 2007, Bishop 2006, Emerton et al 2006, Verweij, 2005, Gutman, 2003, Bayon, 2000); or a particular natural resource (Richards and Jenkins, 2007) and in most cases list both national and international sources. Other looks to leverage resources for global public goods and global development in general (UNU-Wider project, 2005; Report... 2004, Landau, 2004, Addison 2005, 2003; Jha, 2002 and UNU 2001a), and list only international sources.

<p>In Richards, M. and Jenkins M. 2007. "Policy Options for Innovative Financing of Sustainable Forest Management." Globe International G8 Illegal Logging Dialogue, background paper. Forest Trends, Washington DC. USA.</p>

- | |
|--|
| <ul style="list-style-type: none"> • Development of country reduced emission from deforestation and forest degradation (REDD) programs • Fair trade PES carbon payments for community conservation • Carbon credits from agroforestry and small plantations • PES for certified small and medium forest enterprises including community forest enterprises • Eco-certified agroforestry or agricultural products • Carbon soil fund for Africa • Pro-poor eco-tourism • Certified forest management • Coordination between multilateral environmental agreements (MEAs) for bundled PES • Payments for watershed protection services • Regulatory and voluntary biodiversity offset programs • Other measures to promote small and medium forest enterprises including community forest enterprises • Forest fees and other incentives for state forest • Country level multilateral risk mitigation programs • Risk insurance for small and medium forest enterprises including community forest enterprises • Securitization and Eco-securitization • Macro-level funding through forest backed bonds |
|--|

<p>In Koch-Weser, M. and Jacobs, W. 2007. "Financing the Future: Innovative Funding Mechanisms at Work."</p>
--

- | |
|--|
| <ul style="list-style-type: none"> • Lotteries • Round ups (generate "micro-donations" by rounding up bills), • Credit cards (e.g., affinity programs that benefit charities) • Use your phone (send donations via text messaging) • Social/environmental stock exchange • Internet charity shopping |
|--|

In CBD. 2007. "Options for Resource Mobilization, Including Innovative Financial Mechanisms, and a Draft Strategy." UNEP/CBD/WG-RI/2/4.

- Government funded biodiversity education
- Re-occurring funding events (e.g. national conservation dinners)
- Object purchasing such as license plates, pins, etc
- Biodiversity funding programs
- Land trusts and stewardship programs
- Conservation easements and tax incentives
- Innovative mechanisms (e.g., charge for use of plastic bags)
- Carbon tax
- Timber tax
- Currency transaction tax
- Environmental funds
- Bilateral, regional and multilateral aid; ODA; national budgets
- Mainstream biodiversity into development and implementation of major development Initiatives (PRSPs, CSPs, etc)
- Debt-relief instruments that promote conservation
- Partnerships that promote financial investments in biodiversity (e.g., Global Initiative on Banking; Business and Biodiversity)
- Specific funding targets for environmental-related assistance (e.g., % of GNP)
- Bank loans in preferential terms for conservation
- GEF
- Taxes and tax exemptions to encourage environmental conservation or environmental donations
- A prototype fund
- Virtual international trading platform
- A cap-and-trade regime for biodiversity

In Bishop, J.; Kapila, S.; Hicks, F. and Mitchell, P. 2006. "Building Biodiversity Business. Report of a Scoping Study." Shell International Ltd. and IUCN: London UK.

- Africa's bio-beef
- Biodiversity offsets
- Ecotourism enterprises
- Integrated land-based conservation
- Payments for carbon sequestration, specially bio-carbon
- Payments for watershed protection
- Biodiversity management services
- Sustainable biofuels
- Integrated biodiversity conservation and sustainable use program
- Sustainable agriculture
- Sustainable Forestry
- Non-timber forest products
- Sustainable fisheries
- Bio-prospecting
- Biodiversity offsets
- Recreational hunting and sport fishing

In Emerton, L., Bishop, J. and Thomas, L. 2006. "Sustainable Financing of Protected Areas: A Global Review of Challenges and Options." IUCN, Gland, Switzerland and Cambridge, UK.

- Domestic government budgets and foreign assistance
- Philanthropic (e.g. NGOs and foundations)
- Corporate funds
- Personal donations (cause-related marketing such as eco-labeling, adoption/ "friends of"/ sponsorship programs)
- Environmental funds
- Debt-for-nature swaps
- Fiscal instruments (taxes, budgetary transfers and subsidies)
- Benefits sharing
- Revenue sharing (private sector land lease arrangements with local villages, tourist hunting benefits, tourism revenues)
- Cost sharing
- Investment, credit and enterprise funds (e.g., biodiversity enterprise funds)
- Tourism charges
- Resource use/extraction fees
- Bioprospecting charges
- PES

In Verweij, P.A. and de Man M. 2005. "We Can Not Afford More Biodiversity Loss: The Urgency of Protected Area Financing." Greenpeace International, Amsterdam, the Netherlands.

- Bilateral
- Multilateral
- Bilateral/commercial debt-for-nature swaps
- Trust funds
- Markets for watershed services
- Markets for carbon sequestration services
- Markets for biodiversity services
- Markets for integrated services
- Conservation easements
- Conservation concessions
- Support to community-based conservation
- Regulative system for international timber trade
- Currency transaction tax: modified Tobin tax, two-tier currency transaction tax
- Carbon taxes
- Emissions trading schemes and taxes in relation to bunker fuels (aviation, shipping)
- Environmental tax mechanisms
- Reallocation of perverse incentives

In the UNU-Wider study on new and innovative sources of development finance (see Atkinson, 2005; Addison et al, 2005a and 2005b; and Jha 2002

- Currency transactions tax (Tobin tax)
- A general tax on international trade
- Taxes on specified traded goods such as, petroleum , more generally a carbon tax
- A tax on international arms trade
- Surcharges on post and telecommunication revenues
- A Surcharge in domestic taxation
- Earmarking of part of national or local taxes
- Parking charges for satellites placed in the geostationary orbit
- Royalties on minerals mined in international waters
- Charges for exploration in or exploitation of Antarctica
- Charges for fishing in international waters
- Charges for the use of the electromagnetic spectrum
- A tax on international aviation
- A tax on international shipping
- Pollution charges
- A tax on the internet or bit tax
- A tax on traded pollution permits
- Creation of new Special Drawing Rights
- Sale of part of the IMF gold stock
- International Finance Facility
- Increased private donations for development
- Increased remittances from emigrants
- Global lottery
- Global premium bond

Rapport Quadripartite, 2004. Report of the Technical Group on Innovative Financing Mechanisms, 2004. Online: <http://www.diplomatie.gouv.fr/actual/pdf/Reportfieng.pdf>.

Mandatory Mechanisms

- Taxation of financial transactions
- Taxations of arms trade
- International financial facility
- SDRs for financing development

Political Coordination

- Reduction of tax evasion and tax havens
- Increasing remittance's benefits

Voluntary mechanisms

- Voluntary contributions through credit cards
- Socially responsible investing or ethical funds

In Gutman, P. (ed.). 2003. "From Goodwill to Payments for Environmental Services: A Survey of Financing Options for Sustainable Natural Resource Management in Developing Countries." WWF, Washington D.C., USA.

PUBLIC

- Public budget funding
- Earmarking a percentage of taxes collected at national, state or local levels
- Special laws delivering extra-budgetary financial support
- Tax breaks, subsidies
- Earmarking a percentage of selective taxes collected at local, state or national levels (e.g., taxes on energy or cruise ships)
- Earmark charges/fees/fines related to use or abuse of natural resources (e.g. water use, emissions, hunting fees)
- National, state and local development banks' loans
- Environmental funds (endowment, sinking, revolving)
- Multilateral aid and development agency aid
- International development banks' loans
- Bilateral aid

PRIVATE NON-PROFIT

- Community self support groups; social capital
- Secular and faith-based charities
- Special fundraising campaigns
- Merchandising and good cause marketing
- Lotteries
- Social and environmental NGOs
- Foundations

PRIVATE FOR PROFIT

- Household saving and labor assets
- Community based enterprises – formal/informal coops
- Micro-credit/saving/insurance
- Semiformal and informal micro-finance institutions
- Private investment by local businesses
- Commercial bank loans
- Direct investment by non-local investors
- Private-public partnership (PPPs)
- Private sector-community partnerships
- Compensatory environmental investment of large developments
- Venture capital
- Portfolio investors (green funds)

PAYMENTS FOR ENVIRONMENTAL PRODUCTS

- Markets for organic agricultural products
- Markets for sustainably harvested non-timber forest products
- Markets for certified forest products
- Markets for certified fishery products
- Resource extraction charges directly collected by conservation projects
- Allocating part of national, state or local extraction fees to conservation projects in the extraction areas

PAYMENTS FOR ENVIRONMENTAL SERVICES

- Markets for biodiversity conservation and bio-prospecting
- Markets for carbon offsets
- Markets for watershed protection
- Markets for landscape beauty, including ecotourism and tourism
- Markets for development rights and conservation easements
- Quasi-markets and non-market systems of payments for environmental services
- Users fees and entry fees directly collected by conservation projects
- Allocating part of national, state, local user fees to the conservation project in the area providing the environmental services
- GEF payments for global commons
- Funds for projects associated with international treaties
- Other possible systems of international payments for global commons
- Earmarking of international taxes

REDUCING ADDITIONAL FINANCING NEEDS

- Freeing up existing public resources (redirecting environmentally harmful subsidies to conservation activities)
- Encouraging the mobilization of private resources (e.g., securing tenure)
- Mechanisms to increase the accessibility to and to reduce the need for and cost of financing (e.g., pooling, insurance, guarantees)

In United Nations. 2001a. Preparatory Committee for the International Conference on Financing for Development. Technical note No. 3 Existing Proposals for Innovative Sources of Finance. A/Ac.257/27/Add.3.

- Revenues from constraints on tax avoidance, evasion and tax competition among countries
- Revenues resulting from increased international cooperation to combat illegality and corruption
- Special Drawing Rights
- Improved micro-credit
- International air transport tax
- Carbon tax
- Currency transaction tax
- Taxation of the global commons (mining of sea beds or Antarctica),
- Tax or levies on natural resources extraction
- A tax on arms exports
- A bit tax
- Public/civil society/private partnerships

In Bayon, R., Lovink, J.S., and Veenig, W.J. 2000. "Financing Biodiversity Conservation." Inter-American Development Bank, Washington D.C. USA.

- National and international taxation (Tobin tax, international air and transportation taxes, carbon taxes)
- Grants and subsidies (GEF, environmental funds, private philanthropy grants)
- Loans from Multilateral Development Banks. (technical assistance grants)
- Debt-related instruments
- Reforming tax system
- Removing damaging subsidies
- Environmental fines
- Tradable permits and extraction quotas
- Deposit-refund schemes
- Environmental performance bonds
- User fees/charges
- Charging for nature's goods and services (PES)
- Joint implementation and carbon sequestration
- Credits and loans to "green businesses" (including export credits)
- Venture capital (equity or quasi-equity) for "green businesses"
- Guarantees for "green businesses"
- Securitization

In Landau, J.-P., ed., 2004. Rapport à Monsieur Jacques Chirac, Président de la République. Groupe de Travail sur les Nouvelles Contributions Financières Internationales, Paris, France.

- International finance facility
- Environmental taxes
- Taxes on financial transactions
- A surtax on the profit of multinationals
- A tax on arms trade
- Air transport tax
- Bit tax
- Tax on portfolio investment
- Wealth tax
- Tax on foreign direct investment
- Tax on the production of plutonium
- Measures against tax havens and banking secrecy
- Voluntary contributions associated to credit card purchases
- Voluntary contributions associated to utility bill payments
- Voluntary contributions when filling taxes

Annex 2

What are PES and IPES?

In recent years, payments for ecosystem (or environmental) services - PES for short- have become a buzzword. The idea looks straightforward: those who benefit from ecosystem services (ES), like climate regulation, water quality, protection against natural and human made hazards, soil formation, biodiversity conservation, natural recreation, and so on should pay those who provide these services. In this way, money and market-like efficiency would flow towards conservation --chronically under funded-- and towards sustainable agriculture, which is usually shunned by farmers that see in it additional costs and minimal benefits.

Even if the terms “ecosystem services” and “payments for ecosystem services” look new, the idea behind them —that natural environments provide valuable services to humankind — is anything but new, and can be found in ecology and economic textbooks of 20 years ago (Odum, Erlich, Pearce, Oates, Freeman, and others come to mind). What may be new is that some recent efforts to track the flow of ES --particularly the Millennium Ecosystem Assessment-- have brought a sense of urgency to the issue, underlining that the supply of many ecosystem services is in jeopardy. At the same time, the emergency of new arrangements for the provision of ES (e.g. conservation easements, conservation concessions, payments for carbon sequestration, payments for watershed protection, wetland banking, eco-tourism, etc) have raised expectations that there may be new ways of paying for conservation, in addition to the more traditional, and still dominant, public budget allocation, international aid, and private charity.

To note, the issue is far from settled and the PES field is full of disputes. Among the supporters, some see it as a new panacea of market-driven conservation, others look at it mostly as a way to increase the efficiency of public expenditure in conservation, and still others are skeptical of how far this new fad will go either in the private or the public sector. Among PES opponents, some shun the whole idea of “payments” or even of “services,” considering them forerunners of the privatization of the environment or the further disfranchisement of the poor. Others are concerned with its political implications. For example, India’s lowland states oppose PES, fearing that it will make them debtors of upstream Himalayan states. Still others suggest that PES may run against the “polluter pays principle” (PPP), a cornerstone of European environmental policy, and wonder if PES may not open the door to rent seeking, bribes or even blackmail by the would-be providers: the “pay me or else” scenario. In the environmental movement, some conservationists argue that nature is invaluable, and ecologists are weary that market unbundling of ES may pitch ecological function one against the other (e.g. managing for maximum carbon capture may reduce water availability).

PES supporters answer the above concerns pointing to, among other things, (a) that the purpose of the polluter pays principle is to internalize the bad: you pollute, you pay; while on the other hand the purpose of PES would be to internalize the good: you improve the environment, you get paid;²² (b) that ES are already being traded, usually at a zero price, resulting in over-consumption and undersupply; (c) that payments would be due for improvements over a baseline, (d) that equity, property rights and bundling-unbundling issues can be factored into the design of PES schemes; and (e) that far from hurting the poor, PES could become a new way for the rural poor to increase their incomes through the stewardship of nature.

With so many contrasting views at stake, it is no wonder that most PES meetings begin with

²² Unfortunately reality is messier than definitions would have it. If a factory buys ecosystem services to compensate for its pollution, is this a PPP? A PES? Both or neither?

animated discussions on what is or is not a true PES, and after some time decide to move on without having achieved a consensus (see Poats, 2006). Without any expectations of solving the “what is a PES?” debate, we present below several of the better known PES definitions and their pros and cons as a frame.

- Let’s begin with the basics on which everyone agrees: “in a PES scheme those who benefit from ecosystem services (ES) pay those who provide those services.” There is no problem here, but since nature always provides ecosystem services, with this definition every single dollar spent in conservation could be labeled PES. Clearly, this definition is too ample to be of much use and most PES definition discussions focus on how to narrow it down. For example:
- PES experts at the World Bank narrow PES to transactions that bring together the direct providers and direct beneficiaries (the water company, the farmer down river, the firm that needs to buy carbon offsets).²³ Only in this way –they hypothesize— would PES bring to conservation the allocation efficiency of private markets. Note that this approach would leave out of PES a big chunk of the environment: most public goods or quasi-public goods and services for which there is no or too little private demand (and this includes most of biodiversity!). Even more is left out because the WB experts only consider ES those rendered ex-situ (e.g. carbon sequestration, erosion control, water quality, etc) but deny the ES label to in-situ services (e.g. the entrance to a national park, community based conservancies in Africa auctioning annual permits for safaris in their lands, etc.)
- Sven Wunder, a CIFOR expert, has popularized a PES definition where the emphasis is not in private buyers and sellers but in voluntary and conditional transactions.²⁴ The conditionality clause means that, should the seller fail to deliver the ecosystem service in question, the buyer can stop the payment. The point is well taken, although one should note that because of the complexity and randomness of natural systems, a multiyear approach is required and in many cases the buyers actually pay not for the ecosystem service itself, but for land use changes associated with the ecosystem service. The voluntary clause is more problematic, considering that some of the largest markets for ecosystem services –e.g. carbon sequestration, wetland banking, biodiversity offsets-- are driven by government regulations (e.g. cap and trade). In these cases, any particular transaction would be voluntary, in the sense that the buyer can buy from this or that provider. But, the fact that he is in the market looking to buy ES is not voluntary at all.
- Many in the conservation movement favor a broader definition of PES where the buyers may be either (a) the direct beneficiaries of the ecosystem services in question (e.g. consumers, businesses); or (b) a private or public intermediary that passes the costs on to final consumers (e.g. a private or public water company pays for watershed conservation and includes the cost in the water bills); or (c) the government procuring ES on behalf of society, as is the case with many other public goods (education, security, culture, social security etc.). In this approach, what makes a PES a PES is that in any payment arrangement those who pay are aware that they are paying for an ecosystem service that is valuable to them or to their constituencies—and those who receive the payments engage in meaningful and measurable activities to secure the sustainable supply of the ecosystem services in question.²⁵ Some critics consider this definition too broad, and find little gain in now calling PES what

²³ See Pagiola (2005)

²⁴ See Wunder (2005)

²⁵ See Gutman (2007)

previously was known as certification schemes, park entrance fees or conservation grants. Supporters answer that even for traditional finance schemes, adopting a PES approach may improve the procurement and delivery of conservation, as it makes both parts more aware of what they are paying and being paid for.

2. To PES or not to PES?

The payment for ecosystem services wave has aroused expectations that PES may become the silver bullet of conservation, so it is worth underlining that even in the best possible scenario PES would be one of many approaches needed to foster sustainable development. PES approaches are particularly suitable to promote conservation in rural areas, first as a way to compensate farmers and rural communities for the costs of adopting sustainable land uses that improve the flow of ecosystem services, and second (and probably to a lesser degree), to pay for part of the costs of managing public protected areas. But, a voluntary PES approaches would be too slow to address an environmental emergency, or too unreliable to save a species or a habitat on the brink of extinction. PES also will not be appropriate to tackle most urban pollution problems, where the polluter pays principle seems more appropriate. The table below depicts where PES approaches would fit in the broader sustainability agenda.

<p>The urban sustainable development agenda</p> <ul style="list-style-type: none"> • Increase efficiency, reuse, recycle. • Move to renewable energy and organic products. • Change lifestyles and consumption away from over-consumption and pollution 	<p>Appropriate approaches</p> <ul style="list-style-type: none"> • Internalize the bad: the polluter-pays principle. • Include environmental costs into prices • Education, persuasion • PES, mostly as buyers
<p>The rural sustainable development agenda</p> <ul style="list-style-type: none"> • Set aside a sizable sample of world ecosystems • Protect nature’s regeneration capacity (e.g., stop over fishing). • Ensure ecological flows (e.g., ecological river flows) 	<p>Appropriate approaches</p> <ul style="list-style-type: none"> • Build a representative system of protected areas • Sustainable rural production • Internalize the good: the payment-for-ES principle. PES as sellers and buyers

3. International PES (IPES)

Most current PES schemes are of local scale, (e.g. in Quito, Ecuador the water company pays farmers for watershed conservation services); or of national scale, (e.g. in Costa Rica, Mexico and China governments pay farmers for forest protection or reforestation). International PES is less common than national or sub-national PES, but still there are quite a few. To begin with, some well known biodiversity conservation financial mechanisms, that we usually do not see as PES, could perfectly fit the PES definition: tourism companies paying local communities for landscape and wildlife protection services, the international market for sustainable coffee, or bio-prospecting contracts, all can be considered international PES or quasi-PES schemes. Other international PES schemes are rather new, such as the growing international bio-carbon market; and still others are in the design face, including an international biodiversity offset market.

The table below (reproduced from FAO, 2007) offers a taxonomy of PES opportunities both

national and international regarding mainstreaming biodiversity in production landscapes, biodiversity conservation in private lands, and biodiversity conservation in public protected areas.

Opportunities to use PES to fund	Local and country level buyers		International buyers	
	A. Public	B. Private	C. Public	D. Private
Mainstreaming biodiversity into production landscapes ES sold I. Carbon sequestration (low to medium) II. Watershed & other natural resources protection (low to high) III. Biodiversity (low) IV. Sustainable produced food and fibers (high)	A.1. Difficult in low income countries for all I through IV A.2. Better chances in middle (and high) income countries for II and III	B.1. Difficult in low income countries for all I through IV B.2. Better chances in middle (and high) income countries for II and IV	C.1. Limited funds (GEF, bilateral donors) in the short run for I through III. But it may grow if mainstreaming is associated with other MDGs	D.1. Large expectations on the regulation induced demand for I D.2. Large potential for the voluntary private demand for IV D.3. Some potential for voluntary buyers of III (individuals, NGOs, businesses) when associated with other MDGs
Biodiversity protection in private lands ES sold I. Carbon sequestration (low to high) II. Watershed & other natural resources protection (medium to high) III. Biodiversity in situ and ex-situ (low to medium)	A.3. Difficult in low income countries for all I through III A.4. Better chances in middle (and high) income countries for II and III	B.3. Difficult in low income countries. But there can be some rich buyers willing to pay for II (dams, cities) B.4. Better chances in middle (and high) income countries for voluntary and regulation-driven demand. For II, still needs to be in the vicinity of rich buyers	C.2. Limited funds (GEF, bilateral donors) in the short run for I through III But it may grow if associated with other MDGs	D.4. Large expectations on the regulation induced demand for I (carbon) D.5. Potential for voluntary buyers (individuals, NGOs, businesses) of III
Biodiversity protection in public protected area systems ES sold I. Carbon sequestration (low) II. Watershed & other natural resources protection (high) III. Biodiversity in-situ and ex-situ (medium to high)	A.5. Governments are already paying for PAS. Adopting a PES perspective (e.g. valuing the ES of PA) may increase governments willingness to spend in conservation and the efficiency of the expenditure	B.5. Difficult in low income countries. But there can be some rich buyers willing to pay for II (dams, cities) B.6. Better chances in middle (and high) income countries for voluntary and for regulation induced demand. For II, still needs to be in the vicinity of rich buyers	C.3. GEF and bilateral donors are already financing PA, but not in a PES format. Adopting a PES perspective (e.g. valuing the ES of PA) may increase the willingness to fund conservation and the efficiency of the expenditure	D.6. Moderate expectations on the regulation induced demand for I (avoided deforestation; other biodiversity offsets) D.7. Higher potential for voluntary buyers (individuals, NGOs, businesses) of III