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International Guidebook of Environmental Finance Tools: A Sectoral Approach

Protected Areas, Sustainable Forests, Sustainable Agriculture, and Pro-poor Energy

CHAPTER 4: PROTECTED AREAS

August 2012

United Nations Development Programme

ENVIRONMENT AND ENERGY

CONTENTS

CHAPTER 4: PROTECTED AREAS

Introduction

As the world grapples with declining biodiversity, climate change, and the need to protect the ecosystem services that are vital to our future, the importance and value of Protected Areas become ever more evident. As of 2010 there were over 150,000 Protected Areas, covering 13 percent of the earth's land surface, up from 8.8 percent in 1990 (WDPA). More recently the global community participating in the 2010 Nagoya Convention on Biological Diversity agreed to increase the Protected Areas to 17 percent of the land surface area by 2020. This commitment to rapid growth in Protected Areas around the world is only part of the response that is necessary to safeguard the natural, cultural and social capital within their boundaries.

Increased funding also is needed to position Protected Areas to be resilient and fulfill their potential for supporting conservation, climate adaptation and social-economic development. However, as indicated by a 2008 WWF study of over 50 countries, the total of public funds allocated to Protected Areas is declining, thus widening the funding gap for effective operations and revenue generation. In the Latin America and Caribbean region, which contains almost 40% of the earth's biodiversity, the Protected Area funding gap ranges from $314 million per year for basic management activities to approximately $700 million per year for more rigorous management (UNDP, 2011). To supplement inadequate national and regional budget allocations, financial strategies for Protected Areas need to include mechanisms to self generate and retain revenues and lay the foundations for more complex funding options as they become available through climate policy, investor interest and government support.

Financial Tools Included in this Chapter

This Guidebook focuses only on financial tools most commonly implemented in and most applicable to developing countries.

In addition, because climate change is an overarching concern in all four sectors, the efficacy of financial tools that addressed carbon emission reductions was also analyzed. Thus, this chapter did not attempt to assess innovative new financial tools, such as forest bonds, or tools with limited use, such as debt for nature swaps. Instead, the analysis includes:

- Tools in most common use for protected areas throughout the developing world: fees,
- Common tools that hold the most promise for increased revenue: taxes, and
- Tools that directly address climate change: market based mechanisms and PES.

Within this framework, the analysis below looks at financial tools and their implementation; legal, regulatory, and institutional frameworks; technical and business capacities; and community participation as it relates to fees, taxes, PES and market-based mechanisms. In addition, observations are included on price setting for fees and taxes, the role of visitation statistics for marketing strategies, and the need

for financial and metric reporting to attract visitor or investor confidence.

Summary of Findings

The following is a general overview of the findings for this chapter. More detailed conclusions are included in the discussions on individual financial tools and the eight case studies presented at the end of the chapter.

- For Protected Areas, fees typically are not a significant source of funding for management and operations. However, effective implementation of fee structures can lay the foundation and create the framework needed for more productive financial tool implementations in the future.
- Entrance fee research shows there is room for revenue growth with existing implementations. The ability to capture and analyze tourism volumes and market segmentations is imperative in order to reach the full revenue potential of fees as a financial tool.
- The decentralized management of protected areas requires more coordination and technical infrastructure to capture and report financial and tourism information. This information can be used to prioritize capital outlays and future financial tool implementation choices.
- Revenues generated by taxes -- e.g., a departure tax -- can be substantial. Establishing a mechanism, such as a trust fund, with external oversight to receive and allocate funds generated by the taxes will facilitate stakeholder approval. Revenue generation capability, implementation time, and a low degree of complexity make this tool worth consideration, especially when compared to other tools.
- High tourist visitation statistics to a country do not necessarily correlate to the volume of visitors to Protected Areas, but it can be an indicator of revenue potential via hotel or departure taxes.
- Enabling legal frameworks, policy, and governance structures need to be in place in order for pricing strategies and timely fee price adjustment decisions to be effective
- Compared to the time and money invested, PES and Market based Mechanisms have been slow to achieve anticipated revenue levels. There are synergies among Protected Areas services, PES and market based mechanisms that can be leveraged. The capacity and processes built to implement a PES or carbon project can be stepping-stones to climate policy funding, such as REDD+.
- Pricing strategies need to integrate the many services offered by Protected Areas for the long term. Focusing on the value of individual services rather than the value of the entire system minimizes the perceived value of the whole.

The following table identifies the case studies that are included at the end of the Protected Area chapter.

Tool	Country	Case Study Title
Fee - Entry Fee	Indonesia	*Decentralization and Tags: Effective Fee Collection in Bunaken Marine Park*
Fee - Entry Fee	Kenya	*Technology and Fee Collections: More Options for Revenue*
Fee - Departure Fee	Belize	*Fifteen Years of Revenue: Departure Fee Funds Protected Areas*

Taxes- Departure Tax	Palau	*Addition of "Green Fee" to Departure Tax Supports Protected Area Network*
Taxes- Hotel Tax	Macedonia	*Bed Tax 2011: Charging by the Night in Macedonia*
PES - Ecotourism	Cambodia	*Ecotourism Builds Linkages Between Conservation and Economic Improvement*
PES/MBM – Premium Carbon Offsets	Mexico	*Premium Offsets: Sierra Gorda's Suite of Offerings*
MBM – Carbon Credits	Madagascar	*Carbon Credits Bring Benefits to Forest Villages*

Fee Analysis

Protected areas can provide financial value and help pay for themselves in several vital ways:

- Revenue generation from tourist attractions for Protected Areas and surrounding communities;
- Cost reductions and avoidance for climate adaptation efforts by bundling existing environmental services with climate adaptation initiatives;
- Reduction of administrative and transaction costs, because multiple projects (e.g. carbon projects, economic development projects, and Payment for Ecosystem Services - PES) can take place in a single Protected Area;
- Ability to leverage their experience with management structures, financial institutions, policy, and on the ground social and cultural relationships as part of their added value;
- Increased opportunities for climate change-related funding (such as Reducing Emissions from Deforestation and Degradation (REDD+) initiatives) via existing relationships with and access to international and national conservation NGOs; and,
- Income generation from long-term revenue streams for PES services provided to energy providers, agricultural producers and private industry.

However, despite all of the existing and potential economic contributions provided by Protected Areas, the price points set for Protected Area PES compensation, taxes, and fees are often set well below what the market will bear. This not only impacts immediate revenues but also hurts longer term revenues by limiting funds for infrastructure and capacity growth that will in turn facilitate financial tool diversity and risk reduction.

To address this gap, the first subject of analysis for the Protected Areas section is the landscape of entrance fee structures and tourist volumes from secondary and primary research on over 186 Protected Areas in 30 developing countries. This section looks at fee and tourist data from around the world with observations about the benefits of various fee approaches vs. other tool alternatives such as departure taxes.

The fee analysis is followed by an overview of taxes and market-based mechanisms, and eight case studies that explore other Protected Area finance approaches including departure taxes, hotel taxes,

market-based mechanisms (including PES and offsets), and fees.

FEES OVERVIEW

Fees can be self-assessed or imposed on others, but while fees are a useful stream of revenue, they are rarely sufficient to cover the full costs of a protected area (e.g. entry fees rarely cover the full cost of maintaining the protected area). Tourism can introduce a steady stream of revenue through park entry and use fees, however, not all countries can attract high levels of tourism. In addition, expectations may be raised with the introduction of a fee that may never be realized due to poor marketing, a slow economy, or other competing parks and protected areas within the same region.

Some of the challenges with implementing a fee include the following.

Setting/determining the fee: While seemingly straightforward, it can take years to establish stakeholder support to implement a fee. Determining the appropriate amount a potential user will pay may demand significant research, require stakeholder input, and remains an inexact science at best. Fee analyses such as willingness-to-pay studies are time consuming yet critical to setting the right amount and maximizing revenue.

Collecting the fee: A fee collection infrastructure should be established that ensures transparent and accurate accounting of revenue. Simply "collecting the money at the gate" will not guarantee that the revenue will reach its intended target.

Ensuring distribution of monies for originally intended purpose: When fee revenue is delivered back to a central government, it can be redirected to other purposes. A local third party organization established to manage the fee collection and distribution can help ensure that the conservation target is reached.

Corruption/crime can threaten collection/distribution: Fees can generate millions of dollars of revenue and are susceptible to corruption and crime. Again, implementing an accountable and transparent system, such as electronic credit card readers (so that no money changes hands) can help support a fee system of collection and distribution.

ENTRY FEES

Of the variety of fees implemented by Protected Areas around the world, the entry fee is the most common method of producing revenue. Unfortunately, entry fees and other self-generated revenues generally fall short of their income potential. A 2010 UNDP report, *Financial Sustainability of Protected Areas in Latin America and the Caribbean: Investment Policy Guidance*, reports that in 19 countries, 60 percent of funding comes from the central government funds allocated to Protected Areas. Only 11 percent of the funds come from site-based revenues, which include entry fees.

The following research data provides a view of the landscape of entry fees in 153 Protected Areas in 28 countries.

PROTECTED AREA FEE AND VISITOR RESEARCH METHODOLOGY

For this study, primary and secondary research methods were used to collect data from countries in South America, Meso-America, Eastern Europe, Africa, Southeast Asia and South Asia. Fee information has been gathered for 28 countries and visitor statistics were available for 115 Protected Areas.

1. Tourism statistics from the World Tourism Organization were used to identify the top three countries for each region with the highest number of tourist visitors (non residents and non work-related) for the most recent year of available information 2010. Two additional countries with lower tourism volumes were selected for each region.

2. Within each country no more than seven Protected Areas with the highest number of annual visitors were identified for 2009 (the most recent year data available). (Marine Protected Areas and urban parks with open boundaries and no point of entry fee collection were not included in the analysis).

3. Research identified entry fees charged per person per day for individual Protected Areas. Where available other categories of fee structures such as children, vehicles, annual passes and students were noted. Entrance fee amounts reflect 2011 rates. All currencies were converted to $USD using 2011 conversion rates. Note: the fee structures may vary slightly due to currency conversions.

4. The visitor statistics collected included the total number of visitors for each Protected Area with international and domestic visitors broken out when information was available.

5. Revenue scenarios were constructed using the 2011 international fee rates and 2009 international tourist count data.

6. Research was attempted on 187 protected areas in 30 countries. The research produced fee and visitor data as listed in the Summary Table below. Urban Parks such as Tijuaca in Brazil and Vitosha in Bulgaria were excluded from calculations.

Research Summary Table

	# of Protected Areas	# of Countries
Entry Fee Data		
International Visitor Fees	153	28*
International and Domestic Fees	97	22
Visitor Data		
Total Visitors Per Protected Area	119	20
International	90	20
International and Domestics Visitors	87	16

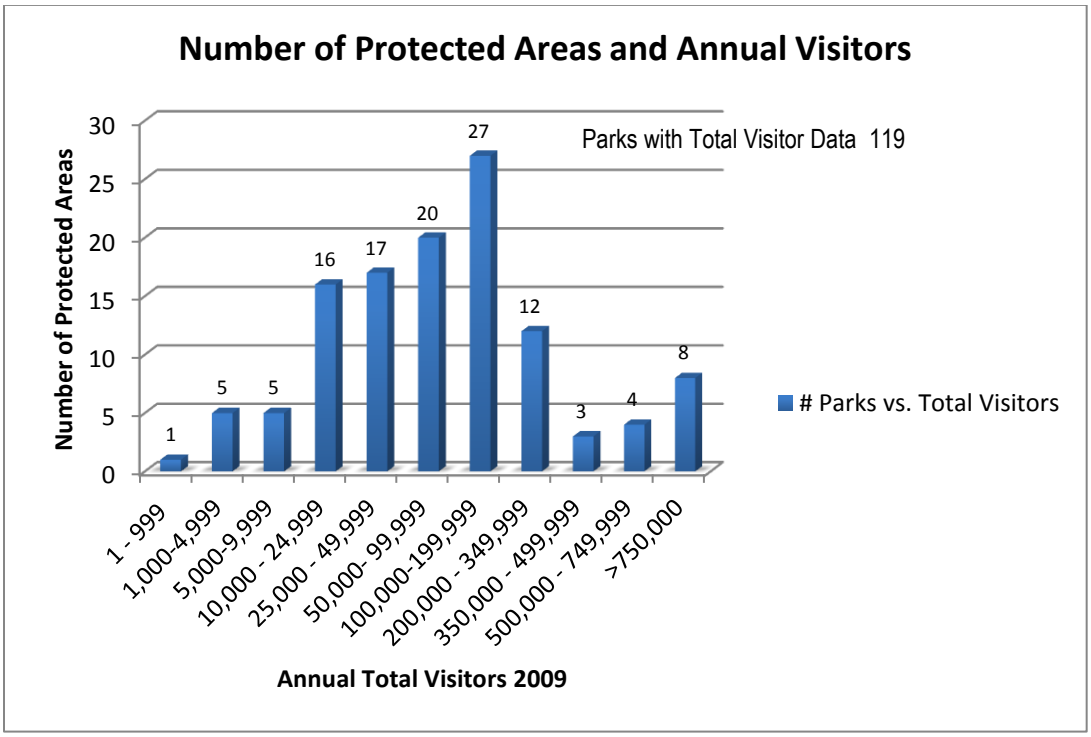
* Of the 30 countries researched data was not available for Morocco or Romania

PROTECTED AREA VISITORS

Figure 1 below represents the number of Protected Areas and the number of visitors to those areas in 2009. The ability to collect and analyze visitor statistics is fundamental to effective pricing strategies and marketing campaigns to maximize revenue generation.

The number of annual visitors per Protected Area ranged from fewer than 1,000 to over one million visitors. Of the 187 Protected Areas researched, statistics for the total number of visitors for 2009 were available for 119 locations. Figure 1 shows eight Protected Areas with more than 750,000 visitors in 2009. Topping the list is Table Mountain in South Africa, with 2,173,548 visitors. Fifty Five percent of the Protected Areas reported fewer than 100,000 annual visitors during 2009.

Figure 1



Findings:

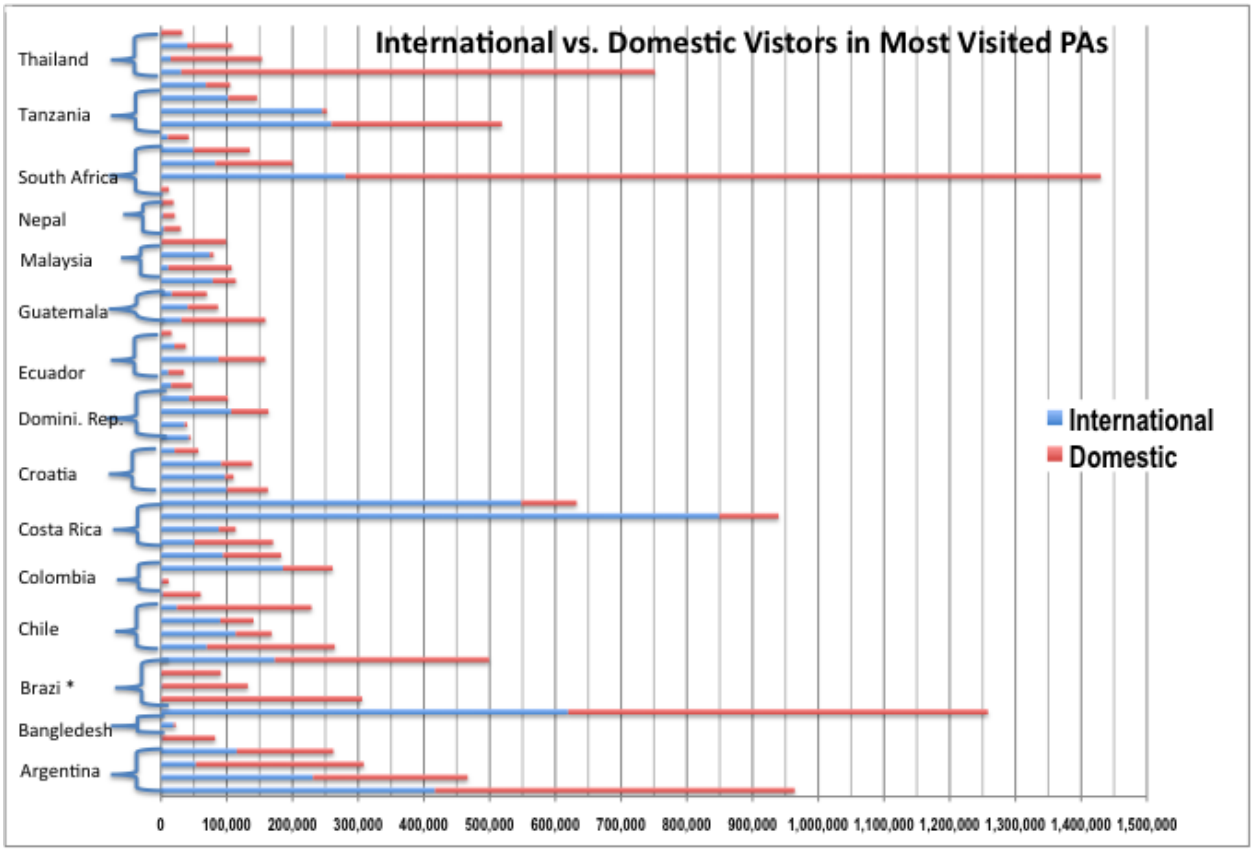
- Based on primary research, there is evidence that a large proportion of countries studied do not have the capability to capture visitor statistics on a per park basis because they lack the infrastructure or reporting methodologies to do so. This was true in most of Eastern Europe, South Asia and South East Asia.
- Decentralized governance structures for a country's Protected Area network impacted the ability to centralize data capture and analysis. In addition, there is a lack of regional consistency on what is counted, as was the case for India and China.

Figure 2 depicts the total number of visitors per Protected Area segmented by International and Domestic visitors. Of the 115 Protected Areas studied, 87 locations captured statistics that differentiated between domestic and international visitors. This type of market segmentation is important for prioritizing marketing efforts for existing and new target markets. As the ability to gather detail on Protected Areas

visitors improves, decisions for infrastructure and capital requirements can be prioritized for the largest value segments.

Figure 2

International vs. Domestic Visitors for the Country's Most Visited Protected Areas



Findings:

- Costa Rica and Ecuador, countries with strong ecotourism marketing strategies have more international than national visitors at the majority of their high visitor destinations.
- Protected Areas with easy access (for example, a well developed transportation infrastructure or close proximity to a major city) for domestic visitors had higher domestic counts than international visitors, such as Kruger Park in South Africa. This target market may be a more effective revenue generator than seeking to increase international visitors. In other words, it might be easier to raise the price for domestic visitors than trying to attract a larger share of the international tourist market.
- Of the 87 parks that differentiated between domestic and international visitors, about half have a preponderance of domestic and half have more international tourists. There are a few countries, such as Thailand, where all of the locations have more domestic than international visitors. In

countries where there are just a few parks that attract large international numbers, focus on domestic revenues may provide more effective use of marketing resources.

- There are many examples where one park accounts for the majority of the revenue and/or visitors. Strategies are needed to determine how money is allocated back to the generating park and whether or not other, less popular parks share in the revenue.

Figure 3 is a snapshot of the Protected Areas with over 250,000 total visitors in 2009. This chart can be used for comparisons of tourist volumes and fee structure. For example a comparison of Argentina's Glacier National Park with Chile's Puyehue Park shows similar total visitor and international visitor volumes. Yet there is a dramatic different in fees charged with Puyehue's fee set at $1.70 compared to Glacier's $25.00.

Figure 3
Protected Areas with over 250,000 Annual Visitors

Country	Name	Total Tourists 2009	International Tourists 2009	International Entry Fee $USD
1. South Africa	Table Mountain	2,173,548		11.47
2. South Africa	Kruger	1,429,904	280,468	30.03
3. Brazil	Iguacu	1,258,159	619,440	30.00
4. Argentina	Iguaçu	964,074	416,902	25.00
5. Croatia	Politico Lakes	939,747	849,382	19.32
6. Kenya	Hell's Gate	874,000		25.00
7. Thailand	Khao Yai	751,397	30,746	13.40
8. Croatia	Krka	632,378	548,216	12.00
9. Tanzania	Serengeti	518,557	259,498	50.00
10. Chile	Puyehue	499,129	173,138	1.70
11. Mexico	Canon del Sumidero	499,101		20.00
12. Argentina	Glaciers	466,551	231,294	25.00
13. Colombia	San Bernanrdo	317,851		3.33
14. Argentina	Nahuel Huapi	308,351	52,963	12.00

Figure 3 Protected Areas with over 250,000 Annual Visitors				
Country	Name	Total Tourists 2009	International Tourists 2009	International Entry Fee $USD
15. Chile	Vincent Perez Rosales	264,496	69,692	2.50
16. Argentina	Tierra Del Feugo	262,262	115,204	15.00
17. Costa Rica	Manuel Antonio	261,156	185,351	10.00
18. Tanzania	Kilimanjaro	252,098	245,450	60.00

Findings:

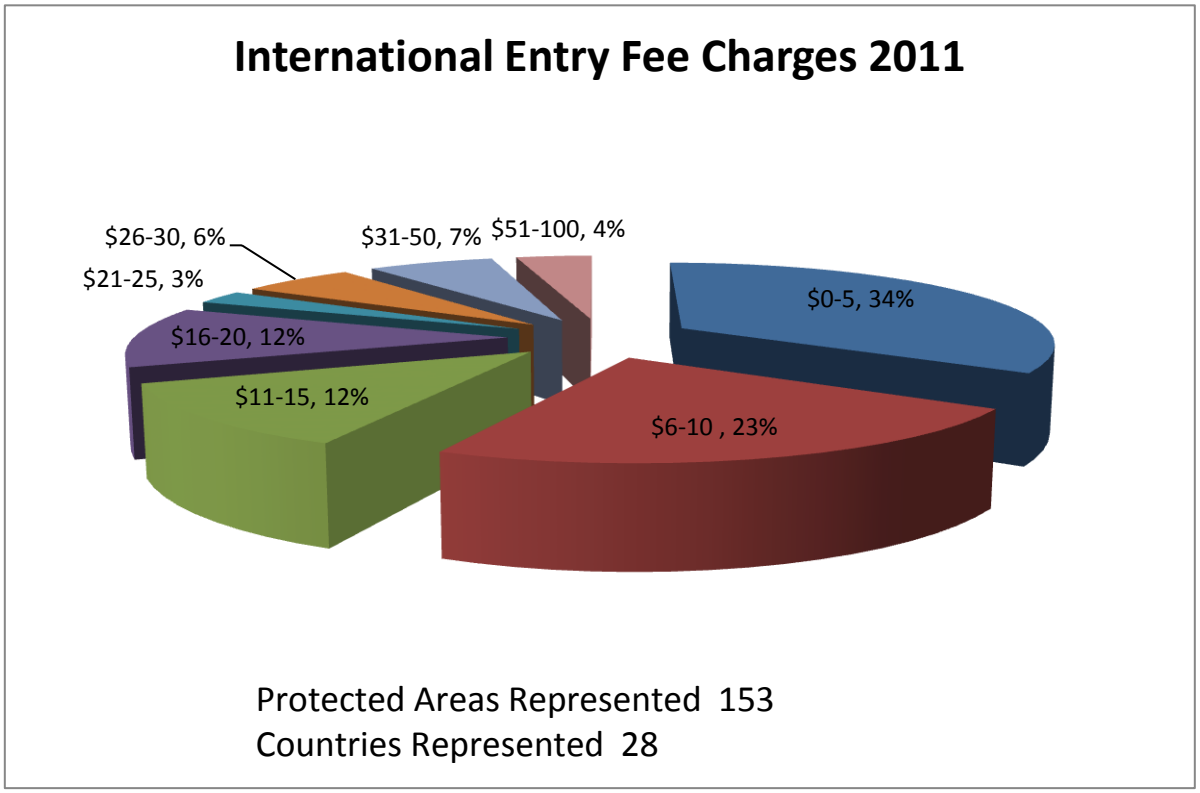
- Higher visitor volumes do not always reflect higher entry fee prices.
- If countries can make the assumption that similar tourist attractions and volumes suggest that there should be similar fees, then differences in fee structure could prompt further analysis to compare access, policy, and fee setting processes.

It is interesting to note the difference in fee structures for Iguacu National Park, which draws over 900,000 visitors in both the Brazilian and Argentina areas. Both parks border the famous Iguacu falls. As of 2009, the entry fee into the Brazil Iguacu Park was $9.00 for international visitors, far below the $25.00 charged by Argentina. In October 2010 Brazil increased the Iguacu entry fee to $30.00. If it had acted earlier, by charging an additional $16 to match the fee in Argentina, Brazil could have realized an additional $12.9 million in 2009 alone from a single park.

FEE PRICES

Pricing that does not take into account consumer's willingness to pay can lead to substantial foregone revenue. In addition, regulatory or policy barriers that inhibit or slow down fee adjustments can negatively impact revenue generation. Locations with comparable attractions and services can provide valuable information to inform pricing studies and infrastructure decisions. The Entry Fee 2011 chart in Figure 4 provides an overview of the daily per person charges to enter the most visited Protected Areas for the 28 countries that reported data. Entry fee charges ranged from $0 - $100. Three countries -- Bulgaria, Romania and the Czech Republic -- do not charge entry fees. Understanding the barriers to fee collection is an important step to creating a financial revenue strategy.

Figure 4
(Percentages rounded)



Findings:

- Over one-third of the Protected Areas for which entry fee amounts are known charge $5.00 or less, including some that charge no entry fees at all. Some of these parks have over half a million visitors a year.
- 57% of the entry fees charge $10.00 and below.
- Only four Protected Areas charge between $51-100.
- A number of countries do not charge different rates for international and domestic visitors, even though they capture the statistics for visitor origin.
- 87 of the Protected Areas differentiate fees between domestic and international visitors. Some Protected Areas have more elaborate pricing models that differentiate among adults, children and students. A few others have further entry fee categories, including vehicle, commercial trucks, tour companies, buses, schools and planes. South Africa and Kenya have leveraged digital technology to collect and report entry fees. (see Kenya case study)

Many entry fees are set below what the market will bear, which impacts their short and long-term revenue streams. There are many factors that contribute to low fee charges for entry into protected areas. The

tourism sector can put up resistance and drive political pushback on fee increases due to fear over loss of tourists. There may be a lack of methodology to determine market readiness or monitor tourist satisfaction. Legal and policy barriers can slow down the decision/approval process for fee increases, or policy changes may be necessary to allow different fee structures at different locations instead of one fee rate for all Protected Areas. Lack of transparency on fund distribution or limited visibility and promotion of fee results can reduce visitor acceptance of fee increases.

FEES VS. TOURIST VOLUME

Figure 5 examines fee amount and Protected Area tourist volume. Clearly the highest fees do not correlate to the highest tourist volumes. In some instances higher fees are used to help lower the volume of tourists and keep the visitor numbers within the capacity of the Protected Area to minimize the environmental impact.

Figure 5
Protected Areas With International Fees Over $25 (2011)

Country	Protected Area Name	Total Visitors 2009	International Fee $ USD (2011)	International Visitors 2009	Domestic Fee $USD	Domestic Visitors 2009
Ecuador	Galapagos	163,480	100.00	106,714	6.00	56,766
Chile	Rapa Nui	43,869	70.00	24,250	21.00	19,619
Kenya	Ambos Eli	133,000	60.00		5.97	
Kenya	Lake Nakuru	189,300	60.00		5.97	
Tanzania	Kilimanjaro	252,098	60.00	245,450	1.00	6,648
Kenya	Mount Kenya	25,100	55.00		4.76	
Kenya	Aberdare	102,700	50.00		2.30	
Tanzania	Serengeti		50.00			
Kenya	Nairobi		40.00		3.58	
China	Wulingyuan		37.70		37.70	
Tanzania	Lake Manyara	146,056	35.00	102,181	1.00	43,875
Tanzania	Tarangire	105,243	35.00	68,403	1.00	36,870
Tanzania	Arusha	84,055	35.00	90,030	1.00	46,418
South Africa	Torres del Paine	140,714	33.00	90,030	9.00	50,684
Kruger	Kruger	1,429,904	30.03	280,468	10.55	1,416,145
Brazil	Iguacu	1,258,159	30,00	619,440	30.00	638,719
Uganda	Bwindi Impenetrable	11,806	30.00		2.10	
Columbia	Los Nevados	60,396	29.97		18.67	
Nepal	Annapurna	79,900	28.00	74,148	Free	
Argentina	Glaciers	466,551	25.00	231,294	10.00	118,141
Argentina	Iguazu	964,074	25.00	416,902	10.00	297,692
Kenya	Hell's Gate	874,000	25.00		5.97	

Findings:

- Fees greater than $25 are being charged in very few Protected Areas, mostly in Africa and South America.
- The lowest fee structures exist in Eastern Europe.
- In some of the most fragile areas, such as the Galapagos, fees are also a method for controlling the volume of tourists that visit the area.
- Kenya has the most robust entry fee model, charging for a wide variety of market segments utilizing technology to collect and report entry fees.

REVENUE SCENARIOS

Scenarios A and B below show the revenue generating potential from entry fees collected from international tourists visiting protected areas compared to *potential funds* possible with a departure tax per international tourist. These scenarios are not to be taken literally, but simply to demonstrate the relative advantages of departure tax and protected area fees under different conditions. The annual tourism numbers are taken from the United Nations World Tourism Statistics (UNWTO 2011) for 2009, (the most recent year statistics were available for all of the countries studies in this report). Many factors determine the appropriate financial tool for each country's situation. The purpose of these scenarios is to highlight factors for consideration.

For the purpose of these scenarios, a $1.00 departure tax per tourist was used. Setting the appropriate rate for a departure tax requires careful analysis and will vary for each country that is considering this financial tool.

Many countries have departure taxes already in place, although the revenue collected may not be used for Protected Areas. However, in these situations, costs and complexities to implement a departure tax are decreased. For the many countries that already have departure taxes in place, the cost of adding a protected-area tax is reduced. In countries where a departure tax does not exist, a higher departure tax may be needed to offset the start-up and operations costs. A portion of any departure tax can be designated for Protected Area conservation. For instance, Belize has a $15 departure tax, of which $3.75 is set aside as a "conservation fee." A third-party managed Trust Fund can ensure that funds targeted for conservation are not diverted to general funds or for other purposes. The existence of a departure tax in the scenario countries was not confirmed.

Scenario A

Scenarios A uses collected information for Bulgaria, Malaysia and Thailand as examples of countries where entry fees collected from international tourists visiting Protected Areas is lower than the potential funds generated by a departure tax per annual international tourist.

Bulgaria is an example of a country that does not collect an entrance fee at this time; however they do capture international tourism statistics by Protected Area. The total number of visitors for their most visited Protected Area was 486,448, with Pirin the highest at 332,725. Under scenario A, it would be necessary for Bulgaria to charge an entrance fee of approximately $12 per visitor to equal the $5,780,000

in revenue that a departure tax of $1.00 per tourist to the country would generate. Of course, costs to implement either an entry fee or a departure tax collection system need to be considered.

In the case of Malaysia (as shown above), the entry fees charged are $3.33 or less and the tourist volume to the Protected Areas is quite low compared to the total number of tourists, 23.6 million that come to the country in a year. In this scenario with such a large volume of tourists visiting the country, the impact to infrastructure at the points of collection would need to be considered. Many countries already collect departure taxes at airports so the infrastructure and process may exist to be leveraged.

Thailand, like Malaysia, has between 85,000 and 90,000 international visitors to Protected Areas. The entry fees for Thailand are two to four times higher than Malaysia and charged at more locations. The revenue generated by Thailand's Protected Areas of $789,109 is dwarfed by the potential $4.2 million from a $1.00 departure tax per international tourist.

Scenario A -- Countries with Protected Area Revenues Lower than Potential Departure Taxes

Country	Protected Area Name	International Entry Fee *	International Tourists **	Protected Area Revenue International Tourists	PA Revenue Subtotal by Country	Departure Tax Revenue Tourists ** @ $1.00
Bulgaria	Centralen Balkan	$No Fee		$0		
	Pirin	No Fee	332,750	0		
	Rilski Manastir	No Fee	119,750	0		
	Sinite Kamani	No Fee	15,148	0		
	Vitosha	No Fee	17,500	0		
	Zlatni Pyasatsi	$No Fee	1,300	$0		
Subtotal			**486,448**		**$0**	**$5,780,000**
Malaysia	NECC Kuala Gandah, Pahang	$No Fee	30,791	$0		
	Penang	No Fee	16,485	0		
	Similajau	3.33		0		
	Taman Negara Kelantan	3.33	196	653		
	Taman Negara Pahang	3.33	40,617	135,255		
	Taman Negara Terengganu	3.33	291	969		
	Tasek Bera RAMSAR Site Pahang	$No Fee	21	$0		
Subtotal			**88,401**		**$136,876**	**$23,646,000**
Thailand	Khao Sok	$ 6.70	39,820	$ 266,794		
	Kaeng Krachan	6.70	14,672	98,302		
	Chiang Dao	6.70	899	6,023		
	Klong Wang Chao	6.70	19	127		
	Khao Yai	13.40	30,746	411,996		

Country	Protected Area Name	International Entry Fee *	International Tourists **	Protected Area Revenue International Tourists	PA Revenue Subtotal by Country	Departure Tax Revenue Tourists ** @ $1.00
	Doi Phukha	13.40	220	2,948		
	Khao Pu - Khao Ya	13.40	156	2,090		
	Ramkamhaeng	$ 3.35	247	$ 827		
Subtotal					**$789,109**	**$14,150,000**

Scenario B

Scenario B uses collected information for Tanzania, Costa Rica and Croatia as examples of scenarios where revenues generated by the Protected Areas entry fees are higher than the revenues generated by a $1.00 departure tax. These countries are also examples of where one Protected Area carries the majority of revenue generation. For example in Croatia, Plitvice Lakes attracted 849,382 visitors providing 60 percent of the $27.2 million of total entry fees collected for all of Protected Areas in 2009. In situations where the revenues generated by Protected Area are skewed, policies for fee reallocations need to be considered. A departure tax to supplement funding for Protected Areas with lower tourism draw may be worth thinking about.

All three of the countries in Scenario B have a focus on international tourism. Costa Rica is an ecotourism destination, Tanzania is known for its wildlife and Croatia draws a wide variety of tourism segments for recreational opportunities.

Scenario B -- Countries With Protected Area Revenues Higher than Potential Departure Taxes

Country	Protected Area Name	International Entry Fee *	International Tourists **	PA Revenue International Tourists	PA Revenue Subtotal by Country	Departure Tax Revenue Tourists ** @ $1.00
Tanzania	Kilimanjaro	$60.00	245,450	$14,727,000		
	Serengeti	50.00	259,498	12,974,900		
	Lake Manyara	35.00	102,181	3,576,335		
	Tarangire	35.00	68,403	2,394,105		
	Arusha	$35.00	37,637	$1,317,295		
Subtotal			**713,169**		**$34,989,635**	**$714,000**
Costa Rica	Irazu	$7.00	50,707	$354,949		
	Manuel Antonio	10.00	185,351	**1,853,510**		
	Volcan Poas	10.00	94,350	943,500		
	Tortuguero	7.00	87,850	614,950		
	Corcovado	8.00	21,851	174,808		

Country	Protected Area Name	International Entry Fee *	International Tourists **	PA Revenue International Tourists	PA Revenue Subtotal by Country	Departure Tax Revenue Tourists ** @ $1.00
	Arenal	$10.00	51,972	$519,720		
Subtotal			**492,081**		**$4,461,437**	**$1,923,000**
Croatia	Velebit	$6.00	7,754	$46,524		
	Paklenica	7.73	97,365	752,631		
	Kornati	8.00	48,420	387,360		
	Krka	12.00	548,216	6,578,592		
	Brijuni	17.11	100,132	1,713,259		
	Mljet	18.00	71,704	1,290,672		
	Plitvice Lakes	$19.32	**849,382**	**$16,410,060**		
Subtotal			**1,722,973**		**$27,179,098**	**$9,415,000**

PROTECTED AREA FEE CRITERIA CHECKLIST

There are many factors to be considered when doing the cost/benefit analysis of fee implementations and evaluating options. The questions in the Protected Area Fee Criteria Checklist below will help identify the information necessary to ensure the project concept has the management/leadership, market information, technical requirements, operational costs, barriers identified and realistic timelines to assist decision-makers and project implementers assess viability and establish the most effective entry fee possible.

ENTRY FEE CRITERIA CHECKLIST	YES	NO
Management/Leadership		
Environmental and financial policies are key to sustainable implementations of fee collections for Protected Areas. Regulatory or policy barriers that inhibit fee adjustments can negatively impact revenue generation. Equally important are the local and regional connections between leadership (government agencies, NGOs, tourism industry stakeholders and the community). Building these connections is time consuming, but a failure to plan for and establish policies, build relationships and identify barriers can delay collecting revenues that reflect the value of the PA. If the majority of the answers in this section are "no" then additional work is necessary before moving forward with the Proof of Concept /Marketing.		
Are there environmental and financial policies that support PA fees?		
Describe national, regional and local environmental and financial policies for PA fee collections:		
Is there political support to charge or raise fees in Protected Areas?		
Describe the political barriers, support and relationships from the perspective of government agencies, NGOs, tourism industry and Protected Area communities:		
Is there an efficient and timely process for setting and adjusting fees time effective?		
Describe the decision process and typical time frame for setting and adjusting PA fee structures:		
Is it possible to establish a legal entity and/or make policy adjustments possible to ensure revenues are allocated for conservation?		
Describe the ability of national, regional and local leadership to set up Trusts or other financial		

ENTRY FEE CRITERIA CHECKLIST	YES	NO
mechanisms to manage the allocation of Fee revenues at the national or Protected Area level:		
Are there strong management and technical skills available?		
Describe management and leadership experience in finance, market assessment, project management and stakeholder capacity building. (Attach CVs if applicable):		
Proof of Concept/ Marketing		
Market research is critical to establish fee structures that generate optimal revenues in alignment with the PA conservations goals. Processes to capture and report visitor trend data for each PA lay the groundwork to set and adjust fee models to reflect visitor willingness to pay, potential market segments and community goals. Protected Areas with similar attractions and services can provide valuable input during the proof of concept phase. Cost estimates of infrastructure, training, reporting, mechanisms to distribute funds, ongoing maintenance, marketing and consensus building are built into the cost benefit analysis and proof of concept. A majority of "no" responses in this section indicate that additional information may be necessary before a fee is implemented.		
Have domestic and international tourist volumes/ trends been captured?		
Describe the ability to capture and report by time increments (monthly, quarterly or annual) tourist visitation data including, nationality, demographics, specific interests, etc. by PA:		
Have potential market segments been identified?		
Describe information collected on specific tourism market segments such as birding, wildlife, hiking, cultural etc.:		
Have fees /service information for comparable locations been gathered?		
Describe research results of domestic and international PAs by attractions, visitor volumes, accommodations, fees structures and collections methods for comparison:		
Have fee collection and tourist attraction costs been estimated?		

ENTRY FEE CRITERIA CHECKLIST	YES	NO
Describe estimates for fee collection options, required infrastructure, training, reporting, and support necessary to highlight and maintain tourist attractions:		
Are there other initiatives in progress as part of the PA revenue strategy?		
Describe other revenue generating initiatives that are underway and ways that efforts in communications, policy, consensus building, costs and implementation can be shared:		
Operations and Support		
Lagging development of reporting and audit systems can impact the long-term success of a fee project. The ability to demonstrate clear metrics, financial tracking and proactive program management that manage risks can position the Protected Area for more complex financial tools. Implementing reporting and audit systems in advance of setting and collecting fees is critical to long term success and transparent revenue collection and distribution.		
Are accounting and audit systems in place to capture and report financials and metrics?		
Describe fee collection options that will support collection of financial reporting and performance metrics to be used for ongoing tracking and audits:		
Have criteria been defined to distribute revenues generated by fees?		
Describe criteria used to distribute revenues to Protected Areas, community projects:		
Have skill gaps and potential solutions been identified for staff and management?		
Describe availability of the skills necessary to design, implement and continuously improve the fee system that would position the PA for additional financial tools in the future:		
Is there a plan in place to address resistance or unexpected		

ENTRY FEE CRITERIA CHECKLIST	YES	NO
downturns?		
Describe methods proposed for conflict resolution and risk management for the fee model, operations, fund distribution and stakeholder management:		
Has a timeline for implementation been drafted and with matching financing needs?		
Describe the tentative fee implementation timelines and estimated finance needs per phase:		

Taxes, PES and MBM

TAXES

Taxes Overview

Taxes usually require large-scale, national-level implementation and developing countries face many challenges when they attempt to establish taxes. Tax development and administration requires experienced and highly trained staff, and ideally computerized systems to collect statistics and track revenue. Even those taxes that may be relatively easy to implement because the collection mechanisms are already in place (e.g. departure taxes where revenue is collected at the airport from departing tourists), may still face opposition from a legislature that is beholden to its own special interests or businesses that are wary of losing customers.

Some of the other challenges with implementing taxes include the following.

Collection and distribution: Because most developing countries lack sophisticated tax systems to track and monitor the collection and distribution of funds, monies often get diverted to non-intended uses. Taxes also fall prey to competing legislative agendas that seek to reassign revenue to other areas.

Relying on future revenue: Reliance on a steady stream of tax revenue can be risky if the tax amount is fixed and not structured with a formula to respond and adjust to economic fluctuations and inflation. Taxes should be implemented so that they can rise and fall as necessary in order to guarantee a certain level of income.

Taxes in lieu of funding: Once a tax is implemented there is a risk that funds originally assigned to environmental sustainability will be redirected elsewhere. If tax revenue falls the environment will suffer.

Financial auditing: Most developing countries do not have the capacity to perform the necessary financial audits to track revenue generation and distribution.

Departure and Hotel Taxes

It is a common practice to charge taxes to tourists in situations where arrival and departures points and accommodations are clearly defined, such as airports, train stations, border crossings or hotels. However, revenues from departure and hotel taxes are often allocated to other government priorities. The tax section includes the following analysis as well as four case studies below. Two of the case studies depict the implementation of a departure tax; one in Palau in 2009 and the other in Belize in 1996. In these examples the revenues are used solely for conservation efforts. The Macedonia case study illustrates an example of a recent hotel tax implementation in 2011.

In general, departure tax implementations and administration are less complex than many other tax tools. The departure tax amount is often added to existing taxes, thus it can leverage existing infrastructure and staffing for minimal additional collection costs. Unlike hotel taxes, departure taxes are not linked to the duration of stay.

Hotel taxes are also commonly used throughout the world. Revenues are often used to support the tourism industry initiatives or other municipal demands. Rarely are hotel taxes dedicated to conservation efforts. Fees are generally charged on a per night basis, or as a percentage of the entire bill.

In countries where there is a high tourism volume but low visitation to Protected Areas and their surrounding communities, a departure tax might be a less costly and better positioned financial tool option to generate conservation funds.

PES/MBM

PES/MBM Overview

Market-based mechanisms are generally large-scale, voluntary or involuntary, with potential for long-term financial sustainability, but subject to market uncertainty. In the new frontier of applying value to the future price of carbon, risk is inherent.

In contrast, PES transactions focus on behavior change at the individual level (e.g., not cutting down trees for fuel on protected land) that maximizes environmental protection. PES also tends to be more pro-poor than global market-based mechanisms.

Overall, considering the time and money invested, Payments for Ecosystem Services and Market-based Mechanisms have been slow to achieve anticipated revenue levels. Fees, such as park entry fees and, in particular, departure taxes, hold out the biggest opportunity for increased revenue with minimal associated costs.

Some of the challenges with implementing MBM and PES include the following:

Global vulnerability: Market-based Mechanisms' revenue flow is vulnerable to global trends and interests (such as droughts or a decrease in global tourism) and drastic price fluctuations as is evidenced

by the carbon market over the past decade. Regulatory changes and international accords (e.g., Kyoto Protocol) can create or destroy mechanisms for the trade of ecosystem services, which are dependent on agreed-upon certification standards. The vagaries of the international carbon and other ecosystem credit markets (voluntary and involuntary) lend a high degree of risk and uncertainty to these types of financing.

Complex tools: MBMs and PES are complex to set up and run. They require an international infrastructure, since the revenue stream usually flows from developed to developing countries. They are financially sophisticated (but are often applied in countries that lack financial capacity) and normally incorporate third party involvement for certification, verification and monitoring.

High risk: Because of the vulnerabilities and complexity, both MBM and PES are seen as potentially risky endeavors, especially when applied to developing countries that may not have the capacity to track and ensure results. In response, PES and MBM projects often request additional reporting requirements, creating yet another hurdle for developing countries.

PES/MBM and Protected Areas

There are many types of ecosystem services that exist, including carbon storage and sequestration, wetland and watershed conservation, and species and habitat protection. High expectations for revenue generation from PES and market based mechanisms, especially as an economic benefit for rural communities, have been slow to come to fruition. Long project life cycles need to be taken into consideration when choosing a market based mechanism or PES project. Additionally, carbon markets are in their early stages of attracting investments and are highly volatile. The three case studies selected below are community based, pro-poor projects where land tenure and land use rights vary. Aggregation of sellers or (service providers when there is no land tenure) has provided revenue streams for the communities.

The case studies in the PES/MBM section are examples where the Protected Areas funding projects bundle multiple tools and community development projects. This bundling improves implementation efficiencies and increases the value to the community and the Protected Area due to overlap in the integrated benefits. In one case study (Sierra Gorda), PES projects for hydrology and biodiversity protection services are combined with carbon offsets. In another example (Bunaken), ecotourism enterprises are combined with PES biodiversity efforts.

Many factors affect the multi-year life cycle of such complex projects including:

- Technical and business skills gaps at the state, regional and local level;
- Availability of financial and technical support from outside organizations to build capacity and provide project viability assessments;
- Arduous nature of regulatory verifications;
- Processing and approval time to manage governmental policy and regulations for land tenure/land use rights changes and equitable compensation structures;
- Establishing authorized community representation that reflects community demographics;
- Establishing legal enforcement capability, roles, and responsibilities;
- Setting up a Trust fund or mechanism to oversee and manage revenue collection and disbursement.

Executing either PES or MBMs clearly presents significant challenges, however if the capacity exists to successfully implement these financial tools, other benefits may accrue. The skills and knowledge needed to design and implement a PES project are transferable for REDD+ and other climate change incentive mechanisms, which can bring additional funding opportunities.

PROTECTED AREAS CASE STUDIES

Protected Areas: Fee

Decentralization & Tags: Effective Fee Collection in Bunaken Marine Park

Case Study: ***Bunaken National Park (BNP), Sulawesi***

Fee Type: **Entry Fee**

Country: **Indonesia**

In 2001 a national decentralization policy was enacted, which changed the 1991 decree that directed fees to the national treasury. Under the new policy, the retention of fees was permitted at a local level for Bunaken National Park (BNP). The formation of the Bunaken Collaborative Management Advisory Board (BCMAB) comprised of local community and private sector members facilitated the implementation of a dual tag/ticket system. The tag system works effectively in the open access Protected Area that has no single entry point. The tag entry system generated increasing revenues from 2002 until 2006, topping out at $155,211 in 2007. In 2008 a dramatic decrease in tourists resulted in a revenue drop to $29,690. The Bunaken tag system was the model for Namena Marine Reserve in Fiji.

Financial Instrument

In 1991 when the Bunaken National Marine Park (BNP) was established, the provincial government of North Sulawesi enacted legislation to allow the Park to charge fees to help protect the park's reefs, mangroves and biodiversity. The initial decree, which directed fee revenues to the national treasury, did not motivate support for fee collection. It was not until ten years later, in 2001, that an effective fee system was put into place, when a national decentralization policy permitting the retention of fees at a local level was enacted and the Bunaken Collaborative Management Advisory Board (BCMAB) was formed.

Fees are charged per person for an annual waterproof tag that can be fastened to a bathing suit or wetsuit. Tourism operators can purchase international tags in bulk for resale to guests. Fee windows within the Park also sell tags and tickets to visitors and tour operators. Tags are individually numbered to prevent illegal resale. Data from the returned receipts is entered into a database to help prevent corruption and gather tourism statistics. Boat and ranger patrols enforce the fee system.

BCMAB allocates 80 percent of the collected fees to enforcement, conservation education, trash

management and sustainable development for the Park's five islands and 30,000 village residents. The remaining 20 percent of the fees are split: 3.75 percent to city, 3.75 percent to district, 7.5 percent to provincial, and 5 percent to national government groups with authority over the park. Bunaken's tag system has become the model for the tag system in other Marine Protected Areas.

2001-Ongoing: Support to Develop Financial Instrument

The Bunaken fee system was adapted from the Netherlands' Bonaire Marine Park system. USAID funded the Natural Resources Management (NRM) program to provide technical support for the Bunaken Collaborative Management Advisory Board. In 2004, USAID funded the Coastal Resource Management Program for an additional eight months in order to complete the fee increase and to formalize the Bunaken zoning plan. The North Sulawesi Watersports Association (NSWA), WWF, Seacology, ICRAN and PADI Project Aware provided additional support for the fee initiative.

Multiple legislative and policy changes were enacted or approved between 1990-2004, including the national decentralization policy, and government decree permitted the retention of fees at the local level. The Bunaken National Park Management Advisory Board comprised of community, private, academic and NGO representatives was established to provide Park co-management.

A willingness to pay study was conducted. Initially, fees were set at $8.00, lower than the $31 indicated by a 1996 Willingness to Pay study. Doubling the fees during the program's second year, from $7.50 per day to $15 per day did not impact the number of tourists visiting the Park. From 2001 to 2007, statistics show a steady flow of international and national visitors.

Results

Revenues:

Year	Revenues	Year	Revenues
2001	$42,000	**2005**	$162, 542
2002	$110,000	**2006**	$160, 025
2002	$123,737	**2007**	$155, 211
2004	$139,648	**2008**	$ 29,690 (Dramatic decrease in tourists)

Environmental Impact: Fish "bombing" and live reef fish collection have been reduced inside the park since 2004. Green turtle and hawksbill turtle populations have increased.

***Community Level Impact*:** The fee system has created revenue streams to villages within the park. Thirty percent of the entrance fee revenues are dedicated to a small grants program for each of the villages in the park.

Guidance for Replication

- A fee for nationals, which was more contentious, was implemented after the foreign tourist fee. The

fee amount for nationals was much smaller than international visitors.

- FAQ's explaining the fee purpose were created in nine languages for distribution to tourism industry and media.
- Industry acceptance was prompted by transparency in expenditures and revenue collection.
- Pressures to use the fee revenues to focus on community development programs instead of patrol programs prompted development of community grant programs.
- Tourists are willing to pay reasonably high user fees as long as they see their payments resulting in visible conservation management.
- Fees were implemented once conservation successes were visible.

Further Information:
http://www.conservationfinance.org/guide/WPC/WPC_documents/Apps_01_Erdmann_v1.pdf

http://www.irgltd.com/Resources/Publications/ANE/2004-05%20Bunaken%20National%20Park.pdf

Protected Areas: Fees

Technology and Entry Fee Collections: Enhanced Revenue Options

Case Study: Kenya Wildlife Service

Fee Type: Entry Fee

Country: Kenya

The Kenya Wildlife Service (KWS) implemented an electronic card payment system to reduce revenue loss, minimize cash handling risk during tourism peaks periods and facilitate financial and tourism reporting information. In 2007 entrance fee revenues offset 68 percent of the KWS operating expenses. Even with the dramatic drop in tourist visits due to political instability in 2008, the fees continue to offset a sizable proportion of operating costs

Financial Instrument

In an attempt to overcome inefficient fee collection, corruption and loss of revenues, the Kenya Wildlife Service (KWS) introduced a debit Smartcard in 2000. KWS and the Kenya Commercial Bank signed a merchant agreement for an electronic funds transfer system. In 2009, the Smartcard program began a transition to the new Safari Card. The Safari Card simplifies the procurement process, allowing visitors to purchase the services they need in one place while providing an array of fee types. The cards can be purchased at Protected Area gates and other posted sales locations. Fees are adjusted to match local and non-local residency status, age, park type, season, students, vehicles, truck passage and business concessions. The goal of this secure payment method is to reallocate staff that are collecting fees to other functions in the parks, reduce revenue loss, minimize cash handling risk during tourism peaks and facilitate financial and tourism reporting information.

2000-2010: Support to Develop Financial Instrument

In Kenya all income earned by a government agency goes to the central government, where budget allocations are driven by political pressure. In the past, national budgets for Protected Areas did not necessarily reflect the services delivered or the amount of income generated by the areas. In 1989, an Act of Parliament established the Kenya Wildlife Service (KWS) to conserve and manage wildlife in Kenya. Under this mandate, KWS retains the revenues from the fees for Protected Areas protection, operations and community benefits.

Prior to the implementation of a debit Smartcard in 2000, it was estimated that the KWS was losing $1.4 million per year through fraud by employees and tour operators. The Kenyan government and the United States Agency for International Development (USAID) co-funded a five-year, $2.5 million program to implement a new fee collection system. In 2007 an additional $1.9 million was used for upgrades to the electronic smartcard fee system. In 2009 KWS signed a $790,278 agreement with Internet access provider UUNET to provide the infrastructure for the Safari Card solution for eight national parks.

Results

Revenues: In 2007, entrance fee revenues of $28,198,385 offset 68 percent of the KWS operating expenses. Tourist visits in 2008 dropped dramatically due to political instability yet the entry fees offset 45 percent of operating costs.

The head of Information Technology at KWS, Mr. Dennis Abuya, stated that with the new card system, KWS has made significant improvements in revenue collection as a result of curbing fraud and theft. "About 42 percent of our revenue has been as a result of checking on fraud," said Abuya,

Environment Impact: The name “Park Entry Fee” has been changed to “Conservation Fees,” to remind visitors that the fees paid to enter the Protected Areas contribute to conservation and the continued survival of wildlife and their habitats. Entrance fee revenues are used to increase ground and aerial patrols continued inside and outside wildlife protected areas. Post-election violence in 2008 created law enforcement challenges. Rhino and elephant poaching increased 100 percent from the 2007 reports however, 90 percent of the poaching occurred outside of Protected Areas.

Community-Level Impact*:* In 2006 KWS budgeted $690,000 for Corporate Social Responsibility (CSR) initiatives for communities near the parks. More money for CSR was budgeted for 2007.

Benefits: Fraud reduction and effective use of staff for conservation efforts are benefits of Safari cards.

Guidance for Replication

- Even though the initial Smart Card System, a precursor to the Safari Card, was set up for much the same reason: to overcome corruption and revenue losses over time, fraudulent KWS stamps and ticket systems evolved.

- The new Safari Card system removes complexity and exposure points from the previous online system and improves the customer experience through ease of purchase.
- Tour operators identified the need to have at least 12 months' advance notice of fee changes so brochures and other marketing efforts reflect accurate prices.
- It is important to enhance the park experience and for tourists to see where their money is being used for conservation and social projects.
- Transparency in accounting and records of revenues and expenditures were necessary for partnerships and alliances with stakeholders.

Further Information: http://assets.panda.org/downloads/paypernatureviewphotos.pdf, http://www.kws.org/about/safaricard.html

Protected Areas: Fees

Fifteen Years of Revenue: Departure Fee Funds Protected Areas

Case Study:

Fee Type: Departure Fee Add-On

Country: Belize

Belize has been collecting a "Conservation Fee" of $3.75 per person since 1996 in combination with a departure tax. Visitors departing the country by plane, vessel or vehicle are charged an $11.25 departure tax as well as the Conservation Fee of $3.75 for a total of $15.00. The proceeds from the Conservation Fee are a primary funding source for the Belize Protected Area Conservation Trust (PACT), an independent legal entity outside of the government. The revenues generated by the Conservation Fee are invested back into the Protected Areas and communities through PACT's Grant Programs. Reported 2010 revenues generated by the Conservation Fee portion of the departure tax were $905,979.

Financial Instrument

Since 1996, Belize has been charging foreign visitors a "Conservation Fee" when departing the country. The fee amount of $3.75 per person has not changed since it was initiated 15 years ago. Except for documented exclusions, all foreign visitors departing by plan, ship or vehicle pay a departure tax of $11.25 and the $3.75 Conservation Fee for a total of $15.00 per person. A brochure explaining the Conservation Fee is provided at the time of payment. The Protected Area Conservation Trust (PACT), an independent legal entity outside of the government, manages the revenues generated by the Conservation Fee.

The revenues generated by the Conservation Fee have generally increased annually from approximately $500,000 in 1996 to $905,979, almost double, by 2010. Conservation Fee disbursements are managed through PACT's Grant Programs to help fill the financial gaps that the government and Protected Area management organizations cannot provide. In 2010 the Conservation Fee contributed almost 40 percent of PACT's total revenues of $2.3 million.

1991- 1996: Support to Develop Financial Instrument

The process for establishing PACT and the Conservation Fee was initiated in 1991. A Consultative Committee comprised of members representing the government ministries/departments, Belize Tourism Industry Association ("BTIA"), the Belize Audubon Society, Programme for Belize, Belize Center for Environmental Studies, the Belize Zoo and the WWF vetted a number of issues and considerations for inclusion in the PACT and the Conservation Fee recommendations.

The following table presents some of the issues taken into consideration during the planning and implementation phases.

Conservation Fee amount	The initial proposed fee amount of US $20, to be included in the airline and cruise ship tickets, raised concerns from the tourist industry that a high fee might drive tourists to other countries. The proposed conservation fee was reduced from US $20 to $10, to $3.75.
The balance of government and non-government representation	A PACT Board dominated by government representation might divert funds to non-conservation uses.
Government reaction to fixed annual allocations	Government ministries might reduce protected area budgets by the amount generated by PACT revenue allocations.
Disbursement of revenues	Should PACT revenues be used for funding activities besides nature protection, such as cultural heritage preservation, urban industrial pollution cleanup, ecotourism development or tourist security?
Board size and makeup	Consider the importance of having the Board size and NGO representation aligned with potential foreign donor expectations (i.e. USAID etc.)
Reserve fund	What percentages should be set aside?

Mechanism to legalize PACT	Should there be a special law or presidential decree?
Deposit mechanism	Determine if funds will be deposited directly into the Trust bank account or do they go first into the Treasury?

It took 5 years to design, implement and legalize the Protected Area Conservation Trust and the Conservation Fee with the Protected Areas Conservation Trust Act passing 1996. The Conservation Fee has been a major funding source for the Trust ever since.

Results

Revenues: The Conservation Fee has remained at $3.75 since its inception in 1996. Annual revenues have topped $900,000 over the last 5 years, almost doubling the $500,000 collected in 1996.

***Environmental Impact*:** The Grants Program partially funded by the Conservation Fee, has evolved to include 10 different grant types ranging from donations of $500 to large grants of up to $400,000 to implement projects aligned with the National Protected Areas Policy and Systems Plan.

Community-Level Impact: The Conservation Fee revenues support Community Development around Protected Areas, providing grants to various organizations including the Belize Fishermen Cooperative Association, Sarteneja Fishermen Association, and the Tribal Farm Village Council. In 2009/2010 grants ranged from approximately $43,000 to $103,000 to foster reforestation, resource management and alternative livelihoods.

Benefits: The Conservation Fee collected from departing tourists contributed almost 40 percent to the Trust for use in support PACT's mission *"To contribute to the sustainable management and development of Belize's natural and cultural heritage by providing effective funding support to protected areas". (pactbelize.org)*

Guidance for Replication

- Political factors delayed implementation by two to three years. Disruptions included the introduction of another tax that prompted the tourism industry to withdraw its support for PACT, political party leadership changes, and a desire by the new government to distance itself from previous initiatives.
- Project delays caused a loss of momentum and further delayed the submission to parliament for a vote by an additional year.
- Due to opposition from the tourism industry the initial fee proposal amount was reduced to $3.75. The amount of $3.75 was chosen because it would round off the existing $11.25 airport departure tax to $15.00.
- PACT Belize supplements funds from the Conservation Fee with investments and donations from agencies, organizations and individuals, and with the twenty percent (20%) commission from Cruise Ship head tax.

- *Further Information:* http://snre.umich.edu/ecomgt/pubs/baspa/complete.pdf
  http://www.pactbelize.org/LinkClick.aspx?fileticket=TmfRlpkYgvQ%3D&tabid=72&mid=416

Protected Areas: Taxes

Addition of "Green Fee" to Departure Tax Supports Protected Area Network

Case Study:

Tax Type: Departure Tax Add-On

Country: Palau

In Palau, an addition to the existing departure tax, called a "Green Fee," was implemented in late 2009. The Green Fee is part of the $35 departure tax paid by foreign visitors when leaving the country. Revenues are paid into a national account managed by the Protected Area Network Fund (PANF) board of directors. Approximately $1.3 million in Green Fees was collected in the first nine months of implementation. These funds will be used to support the management plans for Palau's 23 marine and land based Protected Areas, which include PANF projects, communities and annual operations costs. The Green Fee implementation took six years. This model has been replicated in four other protected areas in Cambodia.

Financial Instrument

Palau's Protected Area Network Act was passed in 2003 to establish a nationwide network of protected areas. To date, five sites are registered with the Palau Protected Area Network (PAN) and it is anticipated that a total of nine Protected Areas will be registered by the end of 2011. Ongoing efforts to register the remaining sites continue.

Legislation passed in November 2009 added a $15 "Green Fee" to the existing $20 departure tax charged to non-Palauan passport holders. Exemptions from the Green Fee are allowed for members of diplomatic missions and their families, pilots, masters and crewmembers of vessels or aircraft and passengers on airline layovers of less than 24 hours. Individuals with visas related to government work, investors, missionary, resident, student or work visas, and those with valid Palau passports or birth certificates showing birth in Palau and at least one Palauan parent are also exempt from the Green Fee.

Green Fee revenues are deposited into a separate private account managed by the Protected Area Network Fund (PANF) board of directors, a private corporation. Ten percent of the funds collected are

dedicated to the PAN Office and PANF administration costs. The purpose of the Green Fee is to support the Protected Areas Network management plans including PANF projects, communities and annual operations costs for Palau's Protected Areas. During the first nine months of implementation, the fee generated over $1.3 million in revenue.

2008-Ongoing: Support to Develop Financial Instrument

The Implementation of the Green Fee took nearly four years of consultation among government departments, community stakeholders and NGOs. The major cost to Palau for the implementation of the Green Fee was the staff time of one individual.

Palau conducted a series of national stakeholder consultations with community leaders, fishermen, resource users and state and national policy makers with the objective to map the critical areas for protection. The Nature Conservancy provided the technical resources to estimate government spending on conservation practices in Palau and to draft the Green Fee legislation. The process included a review of existing state or national fees, the total national budget of the Ministry of Natural Resources and the number of Protected Areas. A visitor's "Willingness to Pay" survey was conducted over a four-month period which assessed the visitors' attitude and behavior towards paying an additional fee to fund an "effective conservation" program of Palau's natural resources. This information was used to set the Green Fee at $15.

The PAN Fund was established in 2008 with the revised PAN Act. The board of directors includes representatives from the International Donor Community; The Nature Conservancy and Conservation International, the Ministry of Natural Resource Environment and Tourism, Ministry of Finance (both ministers serve as ex-officio members) and five other members all with voting rights. A technical committee comprised of government and non-government agency representatives and one representative from each of the PAN sites provides advice in relation to PA management plans, budgets, management plan activities, capacity needs of the state conservation officers and coordination of services to PAN sites. The Board reviews fund distributions to the community conservation areas, with advice from the technical committee.

Results

***Revenues*:** The Green Fee revenue collection started in November of 2009. Between November 2009 and September 2010, $1.3 million in revenues was generated. It does not appear that the Green Fee had negative effects on tourism visits. The Palau Visitor Authority statistics for the first year after the implementation of the Green Fee show an increase in international tourist volume for 8 out of 12 months, compared to the same months the previous year.

Annual tourism count totals for 2010 were only two percent below the 2007 pre-economic downturn levels and the first two months of 2011 showed the highest tourist volumes in over 10 years.

***Environmental Impact*:** The Green Fee is a major contributor to Palau's national goal to preserve 30 percent of near shore resources and 20 percent of terrestrial resources by 2020. Fund distributions of

$50,000 have been received by five of the Protected Areas for management plans, site regulation development and capacity building. An additional $25,000 was received by the Belau National Museum to develop bird- monitoring protocols for PAN sites. By law, remaining funds generated from the collection of the Green Fee during the fiscal year go to the Micronesian Conservation Trust. The PANF will allot five percent received from the environmental protection fee and any unallocated funds to the Micronesia Conservation Trust Endowment for PANF's use at a later time.

Community-Level Impact: Many of the initial disbursements of Green Fee funds were needed to build capacity and frameworks to support the PAN communities. The PANF Board of Directors and technical teams review submissions by community conservation groups.

Benefits: The timing and success of the Green Fee addition to the departure tax will be instrumental in bringing the 23 conservations sites into the Protected Area Network.

Guidance for Replication

- Delays in establishing PANF organizational and operational structures impacted the timing of fund distribution, making it necessary to have a onetime direct distribution to PAN-designated sites and projects. The Board needs to be in place early in the process.
- Early establishment of transparent reporting infrastructure and processes for fund collection and distribution tracking will decrease allegations of misappropriation.
- The designation of PAN sites required ongoing communications with the individual communities to ensure a clear understanding of PAN's roles and ongoing relationship to the communities.

Further Information: Protected Areas Network (PAN) Office, Email: pan@palaunet.com

Protected Areas: Taxes

Bed Tax 2011: Charging by the Night in Macedonia

Case Study: Macedonia Bed Tax

Type: Tax – Bed Tax

Country: Macedonia

Beginning in 2011, Macedonia will charge a "Bed Tax" to visitors staying in or around the country's Protected Areas. The fees are collected by the accommodation managers and wired to the Central Treasury for registration and redistribution. The fee amount varies by accommodation and Protected Area type. All of the fee revenues generated will be distributed to the individual Protected Areas.

Financial Instrument

Macedonia has 75 Protected Areas that have been established over the last 50 years. The protected areas network, with a total area of 187,895 ha, gets little to no public funding and must rely heavily on funding from international donor projects and user fees charged at three national parks. Minimal revenues are generated from concession fees, hotels and other visitor facilities within the park boundaries. With an increased focus on tourism, the process to design and implement a "Bed Tax," or occupancy fee system, has been in progress since mid 2010. The goal of the stakeholders from various national, regional, conservation NGOs and the private sector is to establish the tax/fee system to help diversify funding for the Protected Area network.

The fee collection process will use the accommodation managers to collect the fees, who in turn will wire the funds to the Central Treasury. These funds are registered and redistributed back to the appropriate protected areas.

2010-Ongoing: Support to Develop Financial Instrument

In 2010 Macedonia started the process to amend the Law on Nature Protection and related by-laws to establish a "Fee for a Stay in a Protected Area" to help diversify funding sources for Protected Areas.

Setting fee amounts must have the consent of the national government. Input was gathered from relevant central and local government bodies, National Park Directors, NGOs and other concerned parties during two workshops and a national seminar.

Revenues generated from the fees go to the entities in charge of managing the protected area where the fees were collected, for activities related to the protection and management of the park.

As of November, 2011 the proposed fee structure is pending official consultations.

The proposed Macedonia "Bed Tax" fee structure is tiered by Protected Area IUCN designation and the type of accommodations. The fees range from $0.24 – 0.50 per person, per night.

1. Category II – National Parks and Category III –Monument of Nature

- For a 5 star -- 0.50 per person per day
- For a 4 star -- 0.50 per person per day
- For a 3 star – 0.35 per person per day
- For a 2 star -- 0.35 per person per day
- For a 1 star -- 0.24 per person per day
- Individual houses that rent rooms -- 0.24 per person per day

2. Category IV –Park of Nature, Category V – Protected Landscapeand Category VI Multipurpose Area:

- For a 5 star -- 0.35 per person per day
- For a 4 star -- 0.35 per person per day
- For a 3 star -- 0.24 per person per day
- For a 2 star -- 0.24 per person per day
- For a 1 star -- 0.24 per person per day
- Individual houses that rent rooms -- 0.24 per person per day

The initial fee structure was set low in order to minimize impact on the tourist industry. The fee is collected by the businesses providing the accommodation. They are payable once a month, on the 15th by transfer to the central treasury system, where they are registered and distributed back to the Protected Areas. Eighty percent of the total fees for staying in or near a protected area are used for financing the activities of protection and management of nature in the protected area where the funds were collected. The remaining 20 percent is to be set aside for the budget of the Republic of Macedonia.

Implementation costs included 15 consultant days to help draft the amendments to the law and by-laws, along with costs to hold the stakeholder meetings. No Infrastructure changes are needed to enable the funds' transfer.

It took six months to a year for the project to move from the concept to the implementation phase.

Results

Revenues: Revenues have not been collected to date (Pending government approval). Even though there is a focus on attracting tourism money to the country, the ramp up for significant fee generation will be slow due to the low level of the fee structure. The maximum charge is $ 0.50 per night.

Environmental Impact: Funds collected are earmarked for conservation efforts.

Community-Level Impact: TBD

Guidance for Replication

- Fees were set low to start even though there was a survey of information collected from two park locations that showed the potential for higher fees.
- It is important to have a process in place for assessing and changing the hotel tax amount

Further Information: Pending Info from Consultant

Protected Areas: Market Based Mechanisms

Ecotourism Builds Linkages between Conservation and Economic Improvement

Case Study:

MBM Type: PES – Ecotourism

Country: Cambodia

A PES community-based ecotourism program was started in a village of 236 families located within Cambodia's Kulen Promtep Wildlife Sanctuary. A multi-step process resulted in legal approval of tourism agreements, local land rights, and law enforcement capabilities for the village. The agreement between the Protected Area authorities, World Conservation Society (WCS) and the village stipulates that tourism revenue is subject to the village's agreement to stop hunting key species and follow the land use plan. The PES program links tourism revenues to long-term species and habitat conservation. In 2007-2008 threatened bird populations improved, $4,300 in tourist bird sighting fees went to the village fund, and 10 percent of villagers were employed part time in ecotourism services.

Financial Instrument

Cambodia is a conservation hotspot, containing four of the Global 200 eco-regions that host many endangered species on the IUCN Red List. Illegal deforestation practices place Cambodia's annual land use change percentage as one of the highest reported globally during 2002-2006.

Kulen Promtep Wildlife Sanctuary (KPWS), established in 1994, is the largest Protected Area in Indochina, providing the livelihood for approximately 20,000 people and 35 legal villages. Lack of Protected Area staff and resources prevented basic conservation activities, sustainable community development or implementation of revenue generating mechanisms.

In 2002 a Payment for Ecosystem Services program (PES) focused on Ecotourism and biodiversity was initiated in Tmatboey, a village of 236 families in the Kulen Promtep Wildlife Sanctuary (KPWS). A legal

agreement between the KPWS Protected Area authorities, the World Conservation Society and the village required villagers to stop hunting key species and abide by the jointly created land use plan. In exchange, the village received legalized local land rights, law enforcement capabilities, and local management authority over the operations and revenues for the ecotourism enterprise. Additionally, the value to local families of conserving wildlife and habitat is highlighted by a $30 payment by each tourist to the village fund if all key species are seen and only $15 if only some of the species are seen. The PES program goal is to achieve species conservation by establishing ecotourism at the village level that directly links the revenue received to long-term species conservation.

The ecotourism program provided value to the Protected Area through village enforcement of no-hunting and land use agreements and increased conservation efforts that resulted in larger populations of globally threatened species. In the 2007–2008 season, $4,300 in revenue went to the village development fund and $8,500 was paid to individual village residents who provided tourism services. The success of the Tmoytbay PES Ecotourism tool is demonstrated in Dongphlet village in the Preah Vihear Protected Forest, Prey Veng Village in the Kulen Promtep Wildlife Sanctuary, the Ang Trapaeng Tmor Sarus Crane Reserve in Banteay Meancheay, and more recently in Seima Protected Forest in Mondulkiri.

2002-Ongoing: Support to Develop Financial Instrument

The Tmatboey PES Ecotourism program took six years to develop and implement, from inception in 2002 through the approval for management of the Community Zone in 2008. Initially, the project was subsidized by a $50,000 grant from the World Conservation Society. During the implementation, an additional $79,000 in funding was provided by WCS to set up a local civil society partner, the Sam Veasna Tourism Center (SVC), to provide ecotourism business expertise and to fund guesthouse construction. Payments started after a two-year land use planning process with multi-stakeholder participation. The Ministries of Environment, Agriculture, Forestry and Fisheries, KPWS authorities, WCS and private sector tourism partners provided technical assistance, project oversight and industry expertise. Some legal support was required by PA authorities to legally approve tourism agreements, establish forest management zones and enforce local land use rights.

WCS and elected village committees with local expertise were engaged to set up processes, roles and responsibilities and get approvals for site management of tourism services. The village committee manages the income received, fund disbursements, local enforcement of no-hunting agreements and the land-use plans.

Government approval for land use rights laws was needed to establish the Community Protected Area and the managing committee to create the Tmatboey tourism enterprise, register SVC as a local NGO in Cambodia and pass the Local Commune Council by-laws for community zone management regulations.

Results

Revenues: The Tmatboey Ecotourism PES Project has seen a steady improvement of tourism revenues generated, environmental/wildlife conservation and community development. International marketing and long-term contracts with bird watching travel agencies, along with efforts to improve tourist experience, resulted in increased tourist bookings. In 2007-08, the number of tourists increased to 127 visitors, up 63 percent over the previous year. During the same period, tourist revenue increased by 93 percent, to over $12,000. Year to date information provided by SVC for 2010-11 shows 135 visitors,

sighting payments to the community of $3,370 and payments for tourism services of $9,879 for a total of $13,249 in seasonal revenue.

SVC is now operating at a profit, which allows it to be independent of grant money. Through SVC's tourism promotion efforts, Tmatboey tourists provide revenue in exchange for food, accommodation and local guides. Tourist revenues, plus a small grant fund administered by WCS, ensure lodge maintenance and payment to village staff.

Environmental Impact: Populations of Giant Ibises, Adjutants and Sarus Cranes have stabilized or are increasing. Monitoring shows the population of nesting White-Shouldered Ibis increased from a single pair in 2002 to six pairs and 23 individuals in August 2008. Villagers understand that key species are of value to tourism and should be protected. The committee used some of the collected revenues to pay villagers to conduct law enforcement patrols and guard nesting birds.

Government land boundary agreements that provide sufficient land for agricultural and residential expansion were used to help locally manage the problem of land clearance. In addition there are indicators that local people have begun to self-enforce the land-use plan regulations to maintain a stable human population near the area.

Community-Level Impact: During the 2007-2008 tourist season, $4,300 was collected from tourist contributions made to the village development fund for wildlife sighting payments. $8,500 was generated by tourism services supplied by the villagers (Note: Some of the funds were needed to purchase food and other goods outside of the area). Approximately 40 percent of the 236 families were involved in the program; 25 individuals were employed as guides, cooks and guesthouse managers (averaging $160 per year for part time work), and another 65 individuals benefited from temporary employment.

Benefits: Biodiversity conservation has increased in the area as local monitoring and management is helping to fill Protected Area resource gaps. The land use rights of the inhabitants living within the protected area are now legalized, allowing more control and development opportunities. The money generated is going into the community fund, and is available for village projects. Tourism and business skills capacity building help villagers diversify their income beyond subsistence farming.

Guidance for Replication

- The 2004–2005 pilot demonstrated that tourism revenue needed to be combined with local oversight to engage more people in the program and strengthen the links between the benefits and conservation actions.
- Ongoing success required a portion of tourism revenues to be directed to conservation activities, such as community patrols.
- Responsibility for direct management of local guides and visitor resources, tourist activities, bookings and payments to the SVC and the community improved value chain control and increased the percentage of revenues retained by the village.
- Land clearance problems were managed through boundary agreements with the government that

include sufficient land for agricultural and residential expansion.

- Ongoing land-use audits conducted by PA authorities and the Village Committee are necessary to continue to reduce habitat loss.
- Stable revenues over time will be necessary for people to view tourism as an alternative to subsistence farming.

Further Information:
http://wcslivinglandscapes.com/DesktopModules/Bring2mind/DMX/Download.aspx?EntryId=5412&PortalId=0&DownloadMethod=attachment

http://ideas.repec.org/a/eee/ecolec/v69y2010i6p1283-1291.html

Protected Areas: Market Based Mechanisms

Carbon Offsets to Protect a Biosphere Reserve in Mexico

Case Study: Sierra Gorda Biosphere Reserve

Type: MBM Carbon Offsets

Country: Mexico

The Sierra Gorda Biosphere Reserve (SGBR) is a Protected Area that has been able match a variety of financial tools to the needs of a Reserve, where ninety seven percent of the area is comprised of small land parcels, (less than 1.1 hectares) owned by 95,000 impoverished inhabitants. Efforts to enter the regulatory carbon market, as a Kyoto Clean Development Mechanism (CDM) project, were abandoned after eight years of work. The knowledge and technical expertise built during the CDM efforts were instrumental in the creation of a voluntary carbon market offset offering which resulted in $399,235 in revenue The voluntary carbon market initiatives supplement the existing PES and land purchases projects, where individual landowners sign contracts to rent their parcels of threatened forest in exchange for activities that regenerate the forest, protect the watershed, capture carbon, plant native trees and generate income. The implementation of the PES and the carbon market offset projects provided technical expertise, efficiencies for overlapping project and administrative functions and success metrics that can position SGBR to take advantage of REDD+ or other climate related tools/initiatives and help fund other social and conservation initiatives.

Financial Instrument

> *"Sustainability is a symphony of activities mainly in the backbone of the local culture: it is not a duet or trio."*
> *Patti Ruiz Corzo, Federal Director Sierra Gorda Biosphere*

The Sierra Gorda Biosphere Reserve (SGBR) spans the states of Querétaro and Guanajuato in Mexico. The Reserve is a World Heritage and RAMSAR site, rich in culture, and protects over 383,000 hectares, including some of the best-preserved forests and most diverse regions of biodiversity in the country. With

only three percent of the reserve owned by the public, the majority of the reserve is comprised of small land parcels (average 1.1 hectares) owned by 95,000 inhabitants. Widespread poverty contributes to environmental degradation and deforestation.

The Mexican government and the NGO Grupo Ecological Sierra Gorda (GESG) co-manage the Sierra Gorda Biosphere Reserve. They have implemented a number of carbon and conservation projects including PES and a voluntary carbon market offset offering. From 1987 through 1996, the first 213 parcels of land covering 257 hectares were reforested as part of the Sierra Solidarity Carbon Sequestration Project. Between 1997–2009 Sierra Gorda's Carbon Sequestration Project in Communities of Extreme Poverty (Premium Carbon Project) reforested the land of 163 landholders for a total of 192 hectares. This land was included in the CCB and VCS validation completed in 2011. The price of carbon offsets for Premium Carbon is $20 per offset. Land parcels reforested during 2010 – 2013 are also included in the Sierra Premium Carbon project.

Under the PES program funded by the National Forestry Commission (CONAFOR), World Bank and the Gonzalo Rio Arronte Foundation, individual landowners sign contracts to rent their parcels of threatened forest in exchange for activities that regenerate the forest, protect the watershed, capture carbon, plant native trees and generate income. The biodiversity and community benefits from the PES project may be a foundation for a future Reduction and emission from Deforestation and Degradation Plus (REDD+) project.

The target markets are corporate, government and individual buyers interested in not only carbon but also other benefits such as protecting biodiversity and sustainable livelihoods to avoid deforestation as well as climate change. Since 2006 Voluntary Carbon offsets have resulted in $399,235

1997--Ongoing: Support to Develop Financial Instrument

Sierra Gorda Biosphere Reserve is likely one of the largest community-run protected areas covering over 380,000 hectares and over 600 communities. Conservation efforts for the area have evolved over time, with initial efforts focusing on reforestation and hydrology funded primarily by the Mexican government and implemented by GESG and the NGO Bosque Sustenable A.C., and community members.

In 2000, the Global Environmental Fund provided $6.7 million in funding, administered by the United Nations Development Program, for a 7 year project to establish a co-management model for the Sierra Gorda Protected Area by civil society and the federal government, with support from national and international organizations. An additional $24 million was raised by the GESG.

The initial PES Program Design Document was based on the CDM methodology. The Institute of Technological and Advanced Studies of Monterrey provided technical assistance with carbon inventories and calculations. Landowners of small land parcels signed contracts to rent or lease their land previously used for agriculture and livestock to provide carbon sequestration and environmental services. The NGO Bosque Sustenable A.C., provides sustainable forestry and agriculture expertise and oversight through community organizers and acts as the intermediary between the rural landowners and investors

incorporating their local knowledge of physical and social conditions.

The Sierra Gorda efforts to participate in the carbon markets were filled with stops and starts. The experience with the Kyoto Protocol and the regulated carbon market highlighted the complexity, high cost and rigidity of the Protocol's standards. After 8 years efforts to complete the steps to be part of the regulatory carbon markets were abandoned and efforts refocused on the Voluntary Markets.

One positive outcome from the regulatory carbon market experience was that efforts to adhere to the Protocol prompted the development of some hard learned expertise about measurements, databases and reporting with the support of Forest Trends and Katoomba Group. The UN Foundation and the Katoomba Group provided funding and incubator technical support for the shift to voluntary market mechanisms.

To enhance their existing voluntary carbon market credibility, Sierra Gorda completed the multi year process necessary to meet the criteria for Climate, Community and Biodiversity (CCB) and the Voluntary Climate Standards (VCS). CCB and VCS validation were completed by the Rainforest Alliance in 2011.

The first sale in the voluntary market was completed in 2006 to the United Nations Foundation. The cost per offset of $20 was established based on the cost of implementation and cost of operations. Transactions have been completed with airlines, Schwaab, the UN Foundation and the Federal Government. Sales and promotions are also operated through a United States partner organization, Eco Sierra Gorda & Carbon Neutral Planet project website. Marketing includes highlighting the value of the biosphere as a whole beyond just carbon to show the added value of and interdependencies of the system including biodiversity, water and social impact on the communities.

Results

Revenues: Between 2006 and 2010 carbon transactions resulted in $399,325 in revenue.

Environmental Impact: Since 2006 environmental conservation successes have included: 1,823 hectares of reforestation; almost 3,700 hectares of lands purchased for strict conservation; 4,777 hectares leased for strict conservation; 24,000 hectares of the SGBR core zone placed under civil surveillance and protection; 12,506 hectares protected for biodiversity and hydrological services; 48 micro-watersheds restored between 2006-2010; 360 hectares planted; 28,387 tCO2e emissions reduction.

Community-Level Impact: The landowners receive more income than were received from their previous production activities.

Benefits: Extensive local involvement in the design of conservation and climate protection strategies is supplementing the science with local knowledge.

Guidance for Replication

"I would not wish what we went through on any other forest community. Now that we have different types of compensations working we can share our "basket of products" and services to give others a more

realistic view of developing a mechanism at a local state level. It can be replicated."

Pati Ruiz Corzo on qualifying as a CDM project

- It takes patience, time and the commitment of local communities to build their confidence in your loyalty to them and mutual trust over the years to replant trees. Local carbon compensation producers must trust you to sign the deal.
- The regulatory carbon marketplace was not providing high enough return for the costs and complexity of certification. However, going through the process of qualifying for CDM made it much easier to achieve certification for the voluntary markets. It also made it easier for investors (Schwaab, etc.) to trust and value the product.
- Because Sierra Gorda had so many small parcels they did not fit well into the CDM model and as a result the process cost even more in time and money than expected. It would have been advantageous to learn best practices from others to shorten the process.
- Sierra Gorda works to support both environmental protection and community development. Communicating the value of combined social and environmental value will be necessary to capture both types of investors who focus on either the environment or people.

Further Information: http://www.sierragorda.net/index.php, **Website:** http://www.forestcarbonportal.com; http://www.sierragorda.net/bosquesbio/index.php; http://www.climate-standards.org/projects/index.html

Protected Areas: Market Based Mechanism

Carbon Credits Bring Benefits To Forest Villages

Case Study: **Makira Forest**

Type MBM: **Carbon Credits**

Country: **Madagascar**

In a remote forest region of Madagascar, land tenure and sustainable use rights are granted to legally recognized local community institutions, in exchange for a contractual obligation to conserve the transferred natural resources. The carbon project and sale of carbon credits resulted in a change from an area of high people use to a Community Based Protected Area. The pilot generated $136,800 in revenues used for conservation and the community.

Financial Instrument

Madagascar's Ministry of Environment, Forest and Tourism (MEFT) holds legal authority over most of Makira's forested area, which contains one percent of the world's biodiversity and provides drinking water for over 300,000 people. Slash and burn agriculture practices combined with population growth and inadequate regional land use planning, policies and resources have contributed to deforestation and fragmentation of the forest. The government of Madagascar worked with the Wildlife Conservation Society (WCS), the International Resources Group (IRG) and local communities living in the Makira plateau to develop a carbon credit scheme to establish, protect and grow the Makira Forest Protected Area.

The potential to sequester over 9 million tons of CO2 emissions over a 30-year period prompted a pilot program to market Makira Forest CO2 emission credits. From 2004 to 2006, 40,000 tons of CO2 equivalents (CO2e) were sold to corporations and private investors, at US$5.00/ton, for a total of US$200,000.

In 2008 the government of Madagascar made 9.1 million tons of CO2 available for purchase as carbon credits. The Makira Carbon Company (MCC) was established to manage the ongoing sales of the carbon credits to help finance a wider and more permanent protected area for the entire Makira Forest.

2008-Ongoing: Support to Develop Financial Instrument

Conservation International and WCS provided advocacy, technical assistance and $280,000 over four years to the Makira Forest Carbon Project. This support was key to building the complex relationships necessary to establish new land zoning agreements, create contracts for community based forest management, and provide marketing support and processes for revenue disbursement.

The following major government legislation and policy changes were enacted or approved to support the release of the carbon emission credits /offsets for sale:

- Legalization of the Makira Conservation Area (2005).
- Authorization to transfer natural resource management control to local communities.
- Contract between the regional Department of Water and Forest and the Community Committee.
- Approval of limited tenure and sustainable use rights to legally recognized local community institutions, in exchange for a contractual obligation to conserve the transferred natural resources.
- Contract detailing allowable resource extraction practices within the Protected Area.
- Site development plans signed by the regional authority and community management committee.
- Zone definitions and allowable zone practices.

Overall the project development and implementation took eight years. Major factors contributing to the length of the project included a limited number of organizations with long-term community relations, complex institutional interactions, and a national election.

The Makira Protected Area Carbon project provided communities with management responsibility over their traditional lands, decision power over forest resources, and the right to prevent outsiders from exploiting their resources.

Results

Investors purchasing the Makira Forest carbon credits include: Mitsubishi Group, NAVTEQ, the music group, Pearl Jam, and the BP Conservation Program, a partnership between British Petroleum, Conservation International, Bird Life International, Fauna & Flora International, and the Wildlife Conservation Society. Pilot revenues were allocated to zoning, forest monitoring, marketing infrastructure and community use.

Revenues: Revenues from the pilot were used as follows: $136,800 for protection and community use; $10,000 for forest monitoring; $53,200 for marketing costs.

Going forward, 25 percent of the remaining revenues will go directly to WCS to support the management of the Protected Area and alternative livelihood activities. Another 25 percent of the revenues are to be split between activities to strengthen technical capacity for climate change mitigation, monitor performance, develop of a national carbon strategy, obtain third party validation, and cover marketing and overhead costs. Remaining revenues go to the Protected Area communities.

***Environment Impact**:* The Makira pilot project generated revenues to establish and support the Makira Protected Area. Between 2002 and 2009, the number of hectares within the Makira Forest Protected Area grew from zero to 374,470. Land use was stabilized in the Protected Area, going from 301,043 hectares in zones of human influence to 323,383 hectares in zones of community management. The rate of deforestation dropped from 1.4 percent in (1990-2000) to 1.2 percent in (2000-2005).

***Community-Level Impact**:* The ongoing agreement between WCS and the Government of Madagascar specifies 50 percent of carbon revenue will go to Makira Protected Area communities to support their natural resource management, forest conservation and community development. The Makira Protected Area Carbon project provided communities with management responsibility over their traditional lands, decision power over forest resources and the right to prevent outsiders from exploiting their resources.

Benefits: Forest communities without land tenure or land use rights are legally able to benefit from the revenues generated by the carbon credit sales. Madagascar, a country with limited resources to grow and operate Protected Areas, has increased their Protected Area network through the establishment of a community-based program.

Guidance for Replication

Factors affecting the project timelines and ongoing success include:

- Changes in ministry positions delayed project timelines
- Long travel times to Makira Protected Area communities (one day on foot) required a well thought-out communications strategy to inform and engage large rural communities.
- Hiring a representative from the northern and western regions improved regional communications and facilitated field activities
- The project's size and land tenure status resulted in governance challenges that affected the development of adequate and equitable incentive distribution
- Overlapping administrative local structures impacted the ability to determine which village claims for payments were legitimate for the Makira Forest resources
- Preparation for political instability or leadership changes are needed for contingency planning
- Securing government support at all stages of the project and use of international certification standards for emission reduction monitoring are critical factors to help build investor confidence.

Further Information

http://www.translinks.org/DesktopModules/Bring2mind/DMX/Download.aspx?TabId=409&language=en-US&Command=Core_Download&EntryId=2853&PortalId=11

Cover Photo: *Eskender Debebe/ UNDP Photo*

Acknowledgements: This report is prepared by the Environmental Finance Center West at the School of Business & Leadership,Dominican University of California. Special thanks go to the authors Sarah Diefendorf, Lauralee Barbaria, Nancy Roberts, and Floyd Fox, as well as Andrew Bovarnick for guiding this project onwards.

Production team: Laura Hildebrandt and Serena Bedwal, UNDP.

For more information: **www.undp.org/environment**
United Nations Development Programme
One United Nations Plaza • New York, NY 10017 USA