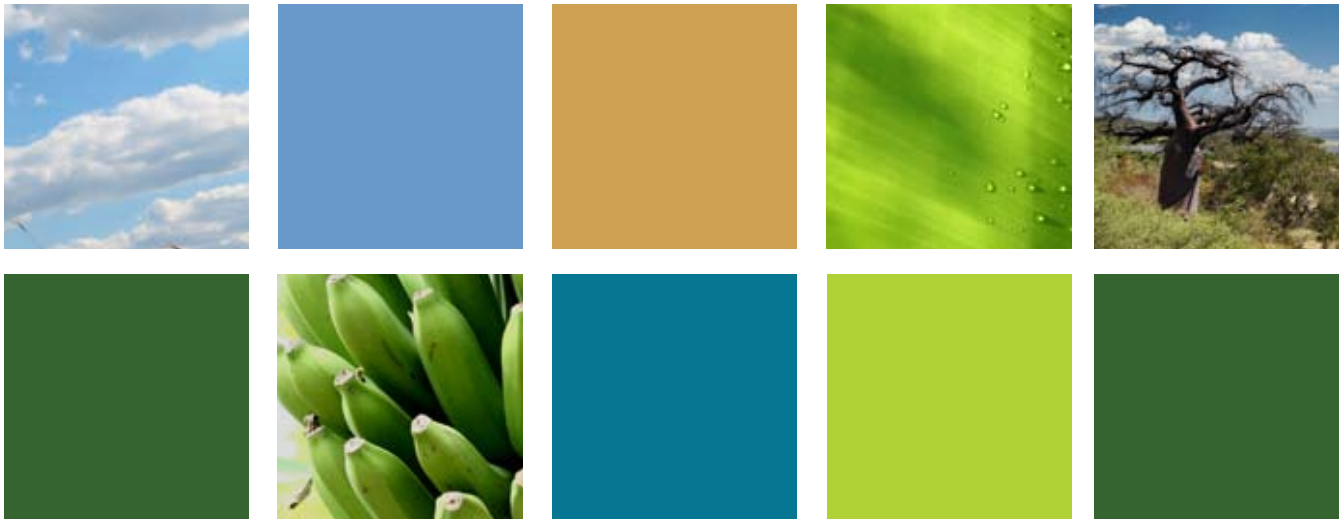




Negotiating For Nature's Services:

*A Primer for Sellers of Ecosystem Services
on Identifying & Approaching Private Sector Prospective Buyers*

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THE KATOOMBA GROUP'S
Ecosystem Marketplace 2007



**F O R E S T
T R E N D S**

Forest Trends (www.forest-trends.org) has been a leader in pioneering markets and payments for ecosystem services.

Forest Trends is an international non-profit organization that works to:

- Expand the value of forests to society,
- Promote sustainable forest management and conservation by creating and capturing market values for ecosystem services,
- Support innovative projects and companies that are developing new environmental markets, and
- Enhance the livelihoods of local communities living in and around forests.

We analyze strategic market and policy issues, catalyze connections between forward-looking producers, communities and investors, and develop new financial tools to help markets work for conservation and people.

Forest Trends has demonstrated the efficacy of payments for ecosystem services through its Business Development Facility (www.forest-trends.org/programs/bdf.htm) and the joint Forest Trends / Conservation International Business and Biodiversity Offset Program (www.forest-trends.org/biodiversityoffsetprogram/). Both of these programs are showing how companies can integrate ecosystem services into corporate decision-making processes.

Through all our work, Forest Trends seeks to enable a new era of conservation that is financially sustainable.

Table Of Contents

		Foreword	
		Introduction	2
	Step 1:	Know Your Product & Its Value Know What You Are Selling Think Like a Buyer When Pricing Your Product	10
	Step 2:	Establish Relationships & Rapport Identify Potential Buyers & Key Contacts Take the Time to Build Rapport	28
	Step 3:	Get to Know a Potential Buyer Listen to Your Buyer's Needs Build Trust Over Multiple Meetings	34
	Step 4:	Draft a Sales Proposal Create a Proposal Present Your Proposal	41
	Step 5:	Structure the Agreement & Finalize the Deal Negotiate Terms Finalize a Contract Maintain a Good Business Relationship	53
		Conclusion The Value of an Honest Broker	56
		References	
		Appendix A: Examples of Payments for Ecosystem Services	59
		Appendix B: Tips for Researching Industries and Companies	61





Foreword

Ecosystems provide services that sustain life. Forests and wetlands, for example, contribute to climate regulation, purifying and delivering water, as well as creating habitat for biodiversity. If nature did not provide these services, we would need to spend billions of dollars developing the infrastructure to accomplish what ecosystems do for free—if we were able to replace them at all.

Today, over 60% of ecosystem functions around the world are being degraded faster than they can recover. For ecosystem services to be maintained, stewardship needs to become more profitable than alternative land uses.

Concern is leading to innovation. Emerging financial markets and business deals are giving value to ecosystem services such as carbon storage, flood protection, and biodiversity conservation. The result is that multi-billion dollar environmental markets now exist and self-organized “payments for ecosystem services” are increasingly emerging.

Market observers estimate that the carbon market traded about Euro 22.5 billion worth of carbon credits in 2006, with the Clean Development Mechanism (CDM) seeing Euro 3.9 billion worth of the action.¹ Looking forward, the prospects for continued growth in carbon markets are strong. And with policy support, there is great potential for land-based carbon projects to attract considerable private-sector investment.

Market analysts also expect regional water-related markets to emerge as water availability and quality becomes increasingly threatened around the world. Regulated markets for trading biodiversity credits (e.g. conservation and mitigation banking) and voluntary investments in biodiversity offsets are also on the rise. ABN Ambro, Goldman Sachs, and Rio Tinto are just a few of the many companies that have expressed interest in biodiversity offsets.²

This primer was written to help rural communities tap into these emerging markets for ecosystem services in order to fund local conservation and sustainable development. In issuing this primer, Forest Trends hopes to increase the number of conversations between potential sellers and buyers of ecosystem services. This primer is intended to be a reference tool for charting an approach to identifying, negotiating, and closing ecosystem service deals with private sector buyers.

¹ The CDM is the Kyoto Protocol's primary means of involving developing countries in its attempts to reduce greenhouse gas emissions.

² For more information see the Business and Biodiversity Offset Program at: www.foresttrends.org/biodiversityoffsetprogram



Introduction

The Challenge of Attracting Private Sector Investment

Developing ecosystem service-related agreements with the private sector requires sweat equity. Literally, potential sellers of ecosystem services must sweat it out by walking across forests and grasslands to measure the ecosystem services flowing from a piece of land. Then, they must sweat the details back in the office while researching companies' site-specific needs. Last but not least, would-be sellers must invest time and effort in building relationships with prospective buyers and crafting a mutually beneficial deal based on a practical business rationale.

Even with a whole lot of sweat, payments for ecosystem services (PES) do not always come together as envisioned. In large part, this is because PES is still in the early stages of adoption by the private sector.

There are, of course, a few notable exceptions in the form of regulated markets trading carbon credits, wetland credits and endangered species habitat credits in Europe, the United States, and Australia. Outside of these markets, however, most companies have adopted a "wait and see" approach to investing in ecosystem services on a voluntary basis. As ecosystem service markets and payments emerge, the transaction costs surrounding those deals that do happen can be relatively high, and the business case for investing in ecosystem services may be difficult to make on a company- or site-specific level.

Sellers of ecosystem services thus will face challenges that are uncommon in most business-to-business sales relationships. For instance, business decision-makers might ask: How do we know for certain that planting trees will result in clean, reliable flows of water and/or will sequester a certain amount of carbon? Or, how do we know that particular actions will contribute to maintaining biodiversity or improving water quality in the watershed? Why should we, an individual company, pay? Why not others, such as government, particularly since these ecosystem services have been provided for free thus far, and many people and companies benefit from them?

Although the process is challenging, and labor intensive, we believe that there is a real future for private sector investment in the stewardship of ecosystem services that impact both the supply chains and reputations of companies.

Based on the recognition that PES transactions are both promising and challenging for communities, Forest Trends has created this primer to help would-be sellers of ecosystem services identify and ink deals with companies in the private sector. Let's take it step-by-step.

An Overview of the Five Steps to a Successful Deal

The process of approaching potential buyers and negotiating business agreements is well studied. In the business world, deals commonly follow a five-step process (see Box 1 and Table 1). Using these steps as a guide can help you approach potential private sector buyers of ecosystem services.

Box 1: Five-Step Sales Process

Step 1: Know your product and its value to prospective buyers

- What product or service am I selling?
- What is its value to a potential customer?
- How do I effectively articulate this “value proposition”?

Step 2: Establish relationships and rapport, also known as “prospecting”

- How do I identify prospective buyers?
- How do I initiate contact?
- What are ways in which I can seek to ensure that if I call, I will get a call back?

Step 3: Get to know a potential buyer, establish their needs, and gain legitimacy.

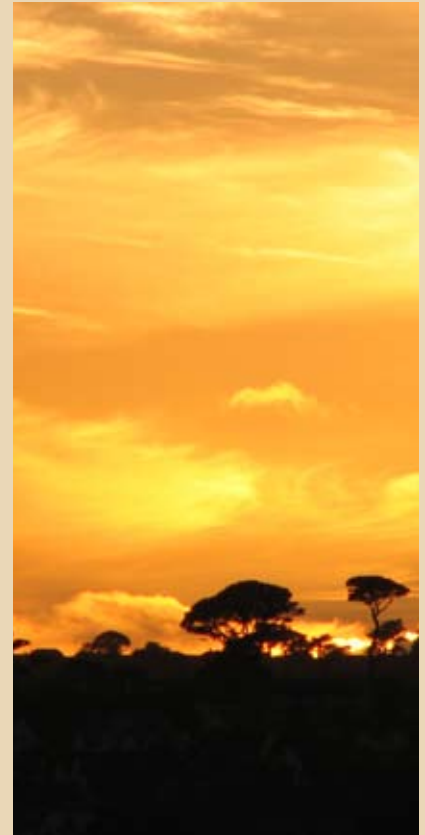
- What are the buyer’s needs? Issues? Challenges? Goals?
- What is the value of our product or service to the buyer?

Step 4: Draft a sales proposal

- How can I test my proposal?
- How can I prepare various options to suggest to the potential buyer? (Such as, what if we did this or that, would that be of greater interest to you?)
- How can I ensure that I am invited back to submit a final proposal?

Step 5: Structure the agreement and finalize the deal

- If earlier steps are successful, the sale has a chance of success.



While the unique elements related to ecosystem service deals will be explored one step at a time, it is useful to begin with a basic business-to-business relationship-building and sales process in order to better understand what a business person commonly experiences, and expects, when approached with a potential business deal. Take, for example, the process for a timber sale.

Sample Process for a Timber Sale

Step 1: Know your product and its value to prospective buyers.

In preparing for a meeting with a potential buyer, an owner of timberlands might not know the exact amount of board feet of wood that he/she has to sell. However, he/she can usually provide the number of hectares/acres and possibly even the approximate number of trees per hectare/acre, or even the basal area and/or number, species, approximate age of the trees, and average diameter at breast height. The seller often also knows what other mills or pulp factories are paying for wood, and potentially the prices for various qualities and sizes of wood.

In other words, the seller has a clear sense of:

- What they are selling,
- How much of it they have for sale, and
- Its value and market price.

Before approaching buyers, a seller might try to research other questions, such as:

- What types of trees are currently in high demand and short supply?
- What prices have been paid for the same product in recent transactions in the area?

Step 2: Establish Relationships & Rapport with Potential Buyers.

The next step for a timber salesperson is to ask friends for contacts at timber mills and/or businesses that might want to buy wood. This approach of working through personal contacts enables the conversation to begin with a friendly introduction—which is a good first step in relationship building. If no immediate contacts exist among friends or family, then a prospective seller can do his/her own research to find out who is buying wood.

Once a list is developed, then the seller can approach potential buyers through a telephone call, letter, email, or even a meeting.

Step 3: Get to Know a Potential Buyer.

Regardless of how initial contact is made, the content of opening discussions generally follows the same structure. The seller introduces him or herself and the product that he or she is thinking of selling. Before telling the potential buyer exactly how much is available for sale and at what prices and delivery terms, the seller would ask a few more questions of the potential buyer. For example:

- What types of trees are in high demand (to confirm their own research)?
- Whether the potential buyer has had timber supply-related challenges (such as delivery delays, which would mean that a mill might be willing to pay a premium price for immediate delivery).

Based on this research, the seller will have good information to put together a specific sales proposal for the potential buyer.

Developing a relationship may take several meetings, a social outing, a recommendation from third parties, or, simply, time. The amount of trust built at this stage will often be a significant factor in closing the deal down the road, so it is worth taking the time to really get to know your buyer.

Step 4: Draft a sales proposal for the potential buyer.

Once all of this early assessment is complete, the seller can document:

- What he/she has for sale,
- How the quality of the wood is distinct and/or superior to that of competitors, and
- Why the buyer (from a business standpoint) should be interested in the product.

This written sales proposal should be delivered to the potential buyer, so that he/she can consider the terms of the sale. Alternatively, the terms of the proposal could be developed jointly with the buyer. Either way, it is important to have the key information in writing so that details are not lost in discussions with multiple parties.

Step 5: Structure the agreement and finalize the deal.

Often, if the previous steps are followed diligently, then the seller's proposal is closely aligned with both the buyer's and the seller's interests. If the buyer has the funds, finds the proposal attractive, and trusts the seller, then this process can lead to 'closing a deal' successfully. It usually takes a few more conversations to work out details and complete any necessary paperwork for transferring funds. Then the sale is closed and both money and goods exchange hands.



This business-to-business timber sale case provides a flavor of what people in private sector firms commonly experience—and often expect—when embarking on business relationships. While the steps are most effective when undertaken sequentially, they are not 'hard and fast.' Relationships are personal; business relationships are no exception. The art of sales is to make the process feel personal and genuine to the buyer. With luck, there will be a match of interests between a buyer and a seller, making the sales process feel natural.

Of course, selling ecosystem services is more complicated than selling wood since the product being sold is often unclear to prospective buyers particularly within the private sector. Therefore, it is all the more important that potential sellers of ecosystem services understand how to make the process look and feel familiar to private sector players. Familiarity, as we all know, can make building a relationship much more comfortable and successful.

Now, let's consider what the same step-by-step process would look like in a deal involving ecosystem services.

Table 1:
Five Steps to Building Business Relationships

Step 1: Know Your Product & Its Value	
QUESTIONS	HOW-TO SUGGESTIONS
<p>What is the “ask”, including:</p> <ul style="list-style-type: none"> • What ecosystem services do you want a buyer to pay for? Where? How? • How is this “ask” (or sales pitch) scientifically supported, so businesses will have “proof” of what they are buying? 	<ul style="list-style-type: none"> • Use established scientific and quantitative methods for measuring ecosystem services • Begin thinking about issues in terms of how a payment for ecosystem service (and the business deal) might be structured, monitored and reported upon over time • Look for partners to assist with putting together parts of the deal that need technical input • Understand the market context (such as, has government regulation created a market? Is the interest in voluntary business action?)
<ul style="list-style-type: none"> • What types of companies in the region might be interested in buying our ecosystem services? 	<ul style="list-style-type: none"> • Assess key industries and companies in the area • Develop a list of prospective buyers / companies • Become familiar with examples of other companies paying for ecosystem services to mention to businesses that you are approaching (see www.ecosystemmarketplace.com)
<ul style="list-style-type: none"> • Why would a payment for ecosystem services be in a company's interest? (Or, what is the “value proposition”?) 	<ul style="list-style-type: none"> • Research individual companies, particularly examining key resource inputs and how they may rely on ecosystem services • Consider scenarios of: <ul style="list-style-type: none"> – potential business opportunities associated with paying for an ecosystem service – potential business risks, if certain ecosystem services are degraded or less readily available

Step 2: Establish Relationships & Rapport	
QUESTIONS	HOW-TO SUGGESTIONS
<ul style="list-style-type: none"> • How can I initiate contact with people in a company regarding potential interest in a payment for ecosystem services? 	<ul style="list-style-type: none"> • Speak with friends, colleagues, and others who may have contacts in the private sector • Request a personal introduction • Attend meetings or conferences that businesses are attending in order to create ‘natural’ meetings in person, followed by—if there is an interest—focused, one-on-one meetings
<ul style="list-style-type: none"> • Am I building trust between myself and individuals at the company? 	<ul style="list-style-type: none"> • Reach out via telephone, email, or letter to request a meeting • If you get a meeting, prepare by learning as much as possible about a company in advance and know how to speak clearly about the advantages of the ecosystem services you are selling • Ask yourself if you are making progress by considering: If I call, will I get a call back?

Step 3: Get to Know a Potential Buyer	
QUESTIONS	HOW-TO SUGGESTIONS
<ul style="list-style-type: none"> • What are the company's challenges, needs, ‘hot buttons’, and goals? 	<ul style="list-style-type: none"> • Prepare for meetings by writing up specific questions to ask • Listen carefully at meetings, especially to unexpected answers • Continually tailor your ideas about the business proposal for a payment for ecosystem service based on what you are learning about a specific companies’ needs / interests as well as your own needs / interests
<ul style="list-style-type: none"> • Have I been clear with the buyer about my goals and needs? 	<ul style="list-style-type: none"> • Write down your goals in short sentences that can be easily communicated

Step 3: Get to Know a Potential Buyer (continued)

- | | |
|--|--|
| <ul style="list-style-type: none"> • Do the payments for ecosystem services that I am suggesting address the business issues and/or challenges that are being discussed? <ul style="list-style-type: none"> – If so, how? – If not, how do I modify my “ask” (and proposed “value proposition” for the business) based on what I’ve learned? • How can I explore potential alternatives at the meeting? | <ul style="list-style-type: none"> • Ask directly about the company’s: <ul style="list-style-type: none"> – reactions to potential business benefits that you have identified, and – level of interest in investing in ecosystem services. • Brainstorm a few options to structuring a payment for ecosystem service deal that would meet both sellers’ and buyers’ interests |
| <ul style="list-style-type: none"> • Do I need senior management support? • Am I talking to decision makers and the right people? • Is this conversation moving forward, towards a potential deal? | <ul style="list-style-type: none"> • Understand who will make the final decision about whether or not to enter a deal, and ensure that you have some contact with those individuals • Ensure that next steps are clear (for example, “After this meeting, I will send you a proposal in writing. What then happens on your end? Within what time-frame?”) |

Step 4: Draft a Sales Proposal

QUESTIONS

- How do I structure the payment for an ecosystem services agreement to ensure that I get my desired outcomes?
- Do I have the type of supporting documentation, financing plans, and other details that my buyer wants?
- Who do I want working on the initiative within a particular company? Why?
- How will I propose and justify these people as “contacts” to the company I’m approaching?
- What tasks are necessary to get to the desired outcomes?
- What is my timeline?

HOW-TO SUGGESTIONS

- Brainstorm with friends, advisors, and partners (ideally some of whom have worked with private sector companies of the same size that you are approaching) about structuring the agreement
- Hire an advisor who has structured similar PES deals to assist you
- See Table 6 for technical resources (page 57)
- Be explicit about resources needed, including specific knowledge of people within the company who are tasked with following up on, and assessing progress of, the deal (for example, should they have ecological or/particular resource use knowledge?)
- Develop a list of tasks with deadlines and estimates of time/resources needed for each

Step 5: Structure the Agreement & Finalize the Deal

QUESTIONS

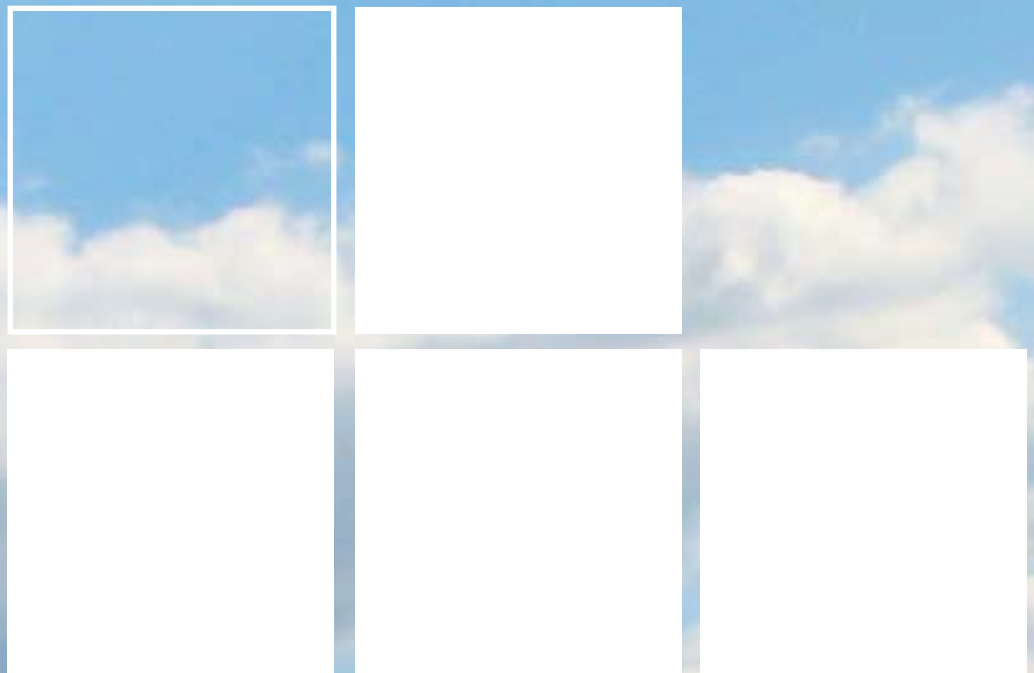
- What type of agreement or contract should we use?
- How do I protect the integrity of the process or deal?
- Is there an opportunity for another PES deal, related to a separate ecosystem service or a different part of the business?

HOW-TO SUGGESTIONS

- Brainstorm with friends, advisors, and partners (ideally some of whom have worked with private sector companies of the same size that you are approaching) about structuring the agreement
- Discuss verification, metrics, and public communications with the prospective buyer
- Consider next steps and ways to build an on-going, mutually beneficial relationship



Step 1: Know Your Product & Its Value





“It’s important to start with a deep dive into interests—theirs and yours. Top performers prepare for at-the-table talks by learning as much as possible about the other party’s needs and concerns. It’s equally important to know your own interests as well. Then, in open communication, options can be explored, mutual interests discovered and agreements crafted that bring equal gain to all parties. A well thought out plan and understanding of this practical negotiation process leads to better deals while building for future business.”

– Miller Heiman, Sales Performance Company

The first step in preparing to approach a potential private sector buyer of ecosystem services is to identify what ecosystem services exist on lands to which you have clear resource use rights and/or ownership. The second step is to identify what companies benefit from these ecosystem services and/or are experiencing business problems due to diminished availability of these services. Putting these together, you can begin to develop a clear “ask” to use in approaching private sector companies. As you develop this ask, several key questions can help define what the ecosystem service deal might look like:

- Question #1:** What is the ‘Ask’? What ecosystem services do you want someone to pay for? Where? How?
- Question #2:** How is this ‘Ask’ scientifically supported, so businesses have “proof” (scientific evidence) of what they are buying? How will it be restored and maintained?
- Question #3:** What types of companies in the region might be interested in buying our ecosystem services?
- Question #4:** Why would this action—buying ecosystem services—be in a company’s interest? Or, what is the “value proposition”

Question #1: What is the ‘Ask’? What ecosystem services do you want a buyer to pay for? Where? How?

Anyone selling ecosystem services must be able to answer a potential buyer who asks: “what ecosystem service(s) do you want me to pay for?” The process of answering this question hinges on technical questions (see Box 2).

Box 2:

Preparing to Approach Companies: Key Technical Questions for Ecosystem Service Sellers

Before initiating conversations with potential private sector buyers, ecosystem service sellers must be able to clearly answer questions such as:

- What is the current status of the ecosystem services that might be the focus of a PES deal?
- How do you know that status? Ecological studies? Community reports? Other sources?
- What is the potential of this ecosystem service to be restored and maintained?
- With what practices? Over what timespan? What data supports these assertions?
- What is the price? Why? Are there comparable PES deals that you can cite?

For example, if Mexican farmers were interested in gaining access to the carbon market, they would need to develop plans for projects that reduce greenhouse gases. Farmers could consider reforesting portions of their land or making changes in agricultural practices. In both of these cases, ecosystem service sellers would need to have documentation that resource management practices could sequester a certain amount of carbon per hectare.

The technical nature of these questions, and the level of scientific support expected by buyers, means that scientists are often needed to assist with this step. Firms can help design initiatives, prepare documentation and even register carbon credits from different projects, but it should be noted that contracting with such firms can be expensive. (See Box 3 for further resources.)

A successful sale begins with defining “What are you asking a buyer?” In the above example, the Mexican farmers would be asking buyers to purchase carbon credits—in some way, a fairly straightforward sale. And prospective buyers could include companies that emit large amounts of carbon and need to offset their emissions either to comply with regulations, or because their company has a voluntary carbon offset program.

Box 3:

Identifying Potential Resources and/or Partners for Quantifying Ecosystem Services

In demonstrating that a seller can deliver an ecosystem service that buyers can quantify, a few organizations may be helpful in identification of resources and/or partners such as:

General Information

- The Katoomba Group (www.katoombagroup.org)
- The Ecosystem Marketplace (www.ecosystemmarketplace.com)

Carbon

- Center for Capacity Building (www.ccb.ucar.edu)
- The Edinburgh Centre for Carbon Management's Plan Vivo (www.eccm.uk.com/expertise_services/developing_projects/plan_vivo.html)

Water

- World Resources Institute's NutrientNet (www.nutrientnet.org)
- The Natural Capital Project—a consortium of Stanford University, World Wildlife Fund and The Nature Conservancy (www.naturalcapitalproject.org)

Biodiversity

- Business and Biodiversity Offsets Program—a joint program by Forest Trends and Conservation International (www.forest-trends.org/biodiversityoffsetprogram)

Carbon sequestration, of course, is only one type of ecosystem service around which payments have been made. In fact, bundling several services together in one project to maximize income is of growing interest to many sellers. The major types of ecosystem services that have been sold to date include:

- Water-related Ecosystem Service
- Climate and Forest-Related Ecosystem Service
- Soil Protection
- Biodiversity Protection, including Species Conservation

Any or all of these services could be the focus of business deals (also known as payments for ecosystem services, compensations for ecosystem services, and/or investments in ecosystem services). We discuss how to develop an 'Ask' for each of these types of ecosystem services in detail below. (Box 4 below also provides a sample of an 'Ask') In this section, we also discuss the business case for why a business might invest in ecosystem services.



Water-related Ecosystem Services

What?

To provide high quality and reliable quantities of water in a watershed, sellers might offer to implement, for a fee, specific natural resource management practices.

How?

- Restoring, creating, or enhancing wetlands for the purpose of compensating for damage or destruction to another wetland area,
- Maintaining forest cover,
- Reforesting, possibly with a focus on specific (often native) tree species, or
- Adopting 'sustainable' / 'best' land use management practices, such as from sustainable farming or sustainable forestry (including practices such as: restricting activities alongside riparian zones to reduce erosion; eliminating tilling to minimize soil loss, etc.)

Why?

Actions would be selected to provide some, or all, of the following benefits:

- creating or maintaining natural filters in the watershed to reduce pollution—such as nitrates or pesticides—in local water supplies,
- maintaining vegetation in order to aid in regulation of water flow through the year,
- controlling for floods, and
- minimizing soil loss and sedimentation.

Box 4:

Selling the Value of Forested Hillsides to Retailers Using the Panama Canal

As deforestation in the hills surrounding the Panama Canal has increased, it has caused erosion and siltation of the canal—as well as increasing uncertainty surrounding freshwater supplies. The result is an annual cost of about \$60 million in canal dredging fees as well as seasonal water shortages. ForestRe, a forestry insurance company, saw an opportunity to protect the watershed by paying farmers and local communities to reforest the watershed and change practices to avoid further deforestation. ForestRe also knew that insurance companies were charging high premiums to protect against the risks of shipping interruptions if the canal was out of commission.

ForestRe proposed that canal users support a bond, using bond revenues to pay local farmers for changes in practices. To find buyers for the bond, ForestRe proposed to insurance companies that they lower premiums for anyone who purchased the bonds. Hence, retailers such as Wal-Mart would be potential bond buyers. The bond plan could help ensure ongoing access to the canal and enhance freshwater supplies.

Source: www.ecosystemmarketplace.com



Climate and Forest-related Ecosystem Services

What?

To address key drivers of climate change, sellers might offer to provide, for a fee, services that help reduce or sequester carbon.

How?

- Preventing deforestation,
- Reforesting land, particularly in tropical regions,
- Reducing methane from farms, such as through manure management practices or changing the type of feed given to animals,
- Implementing conservation tillage in agriculture to minimize release of carbon from the soil, and/or
- Avoiding actions that increase acidity of the ocean and release carbon.

Why?

- Keeping carbon dioxide in trees, oceans, and soil rather than releasing it into the atmosphere,
- Increasing the uptake of carbon by trees and within forests, and
- Preventing:
 - release of methane to the atmosphere,
 - increases in the atmospheric temperature, and
 - acidification and warming of the oceans.



Soil Protection

What?

To provide for healthy and intact soil, sellers might offer to undertake, for a fee, specific land and soil management activities.

How?

- Using forest cover to minimize soil erosion and loss of nutrients,
- Implementing sustainable and/or 'precision' agricultural techniques to prevent excess application of fertilizers and other nutrients, and/or
- Switching to alternative agricultural practices such as conservation tillage, or protection of natural waterways to prevent soil erosion and maintain soil health as well as overall fertility.

Why?

- Avoiding loss of soil through runoff, and
- Maintaining healthy soils and minimizing need to apply fertilizers and pesticides.



Biodiversity Protection

What?

To protect biodiversity, sellers might offer to provide biodiversity offsets, which are conservation actions designed to compensate for the unavoidable impact on biodiversity caused by infrastructure projects, ensuring “no net loss,” and, preferably, a net gain of biodiversity. (See Box 5 on contexts for appropriate use of biodiversity offsets.)

How?

After following accepted planning processes and attempting to avoid or mitigate biodiversity losses,³ infrastructure projects may further protect biodiversity by investing in activities such as:

- Establishing biological corridors between protected areas,⁴
- Creating new protected areas or strengthening ineffective protected areas,
- Replanting degraded areas with native species and/or removing invasive alien species,
- Maintaining healthy soils and minimizing need to fertilizers and pesticides,
- Managing biodiversity to maintain quality agricultural products, ensure pest control, pollination, genetic resources or of key habitats;
- Avoiding damage to areas of cultural, spiritual or aesthetic value, and/or
- Launching conservation projects outside of the project area.

Why?

Maintaining biodiversity at a landscape scale.

Box 5:

Contexts for Use of Biodiversity Offsets

Offsets should be only employed in the context of developments that are legal and appropriate, and when the developer has first used best practice to avoid and minimize harm to biodiversity (following a hierarchy of avoid harm, minimize damages, mitigate, and then offset). Through activities that are beneficial to the conservation of biodiversity, offsets are intended to compensate for the residual, unavoidable harm to biodiversity caused by a development project, to ensure “no net loss,” and, preferably, a net gain of biodiversity.

Source: Business and Biodiversity Offset Program (www.forest-trends.org)

Question #2: How is this ‘ask’ scientifically supported, so businesses have “proof” of what they are buying?

A seller will need to provide documentation about both the ‘baseline’ / current status of the ecosystem services around which a deal is crafted as well as the status over time, in order to show that the services being paid for are continuing to flow (and improving) over a specified period of time. In addition, sellers may need to provide sufficient (and often regular and/or independent) verification of their actions and how

³See a description of basic management versus best practice management of biodiversity in Grigg, A and ten Kate, K. 2004. *Protecting shareholder and natural value. Biodiversity risk management; towards best practice for extractive and utility companies*. Insight Investment, London.

these actions provide specific services. In other words, these ecosystem service payments will require that sellers:

- (a) Establish a 'baseline' of what the state of ecosystem services is today,
- (b) Provide documentation that sellers are indeed maintaining specific ecosystem,
- (c) Structures and functions, and
- (d) Remain accountable, to the buyers, for ensuring the delivery of the service.

These parameters, are essential to PES deals. As with any business relationship, payment is contingent on the reliable delivery of the services being bought.

Box 6:

Illustrative Scientific Support, and Business Proof, for Payments for Ecosystem Service Deals

- A certain number of a specific species of tree leads to a particular amount of carbon sequestered
- A specified set of riparian zone practices will lead to certain outcomes in terms of water quality and quantity, or reduced sedimentation in local waterways
- A set of biodiversity livelihood and conservation activities will meet the needs of local communities and help a government authority meet its policy objectives

To supply the required documentation of the current status of ecosystem services and how specific actions affect these services, potential ecosystem service sellers—and their partners—can work with science-based organizations to:

- Map ecotypes and the services they provide,
- Map land uses,
- Identify and quantify as much as possible the ecosystem service(s) provided,
- Quantify and/or price the ecosystem service(s), and
- Analyze how different land-use activities affect the provision of ecosystem services.

There are various methods to quantify ecosystem services, related to carbon sequestration, water-related attributes, and biodiversity. In some cases, it may be in the interest of all parties to engage scientists and other experts, if only on a short-term contractual basis, to undertake measurements.

A range of institutions—within the public, private, and non-governmental organizational sectors—can provide support services. For example, verification and documentation is one area where organizations now exist. Where highly specialized expertise is needed for limited time periods—such as quantifying ecosystem services or developing ecosystem monitoring methods—specialized companies, public agencies or experienced NGOs can provide business and technical support services. (For information, please see appendices and the 'PES Tools' page of the Katoomba Group website at: www.katoombagroup.org/)

⁴Extensive work on business applicability of biodiversity offsets for different sectors and types of projects is being conducted by the Business and Biodiversity Offsets Program, co-lead by Forest Trends and Conservation International. See www.forest-trends.org/biodiversityoffsetprogram/index.php. See also Kate, Bishop, and Bayon, "Biodiversity offsets: Views, experiences, and the business case," November 2004, a joint IUCN & Insight Investment Report found at ecosystemmarketplace.com/documents/cms_documents/cs-inc-IUCN-II-report-en.pdf.

Question #3: What types of companies in the region might be interested in buying our ecosystem services?

Ecosystem service buyers can be:

- a single company,
- a group of companies (such as ecotourism operators)
- a participant within a larger cap-and-trade system of buyers, that requires purchase of a certain amount of services to offset damages (and therefore streamlines the relationship building process).

In the earliest stages of identifying potential buyers, brainstorming helps. For example, you can ask:

- Who are the largest employers?
- Who owns significant real estate in the area where we are working?

If you are not sure, then you can turn to locally operating nonprofit organizations or government agencies. Both entities can often provide data on employers, landowners, and so on.

To develop a list of potential private sector buyers, a few other brainstorming questions include:

- Has an industry been receiving negative press about their environmental practices lately? (If yes, they may be more receptive to a project offering environmental and/or social benefits.)
- Has a company been losing ground to competition—either on environmental or social issues or more generally in the marketplace? (If so, this can be a benefit as new initiatives can boost its marketing position.)
- Has a company or industry been a leader on other environmental issues? Is management innovative?
- Is a company growing fast? (If yes, this company might not be the best to approach as new initiatives may be too difficult to implement in that context.)

Prospective sellers of ecosystem services can consider approaching companies individually or as part of a group (see Box 7).

Potential buyers may exist in the following industry sectors:

- Oil & Gas
- Utilities: Energy companies such as those operating dams
- Utilities: Wastewater Treatment/Water Facilities
- Mining
- Agriculture
- Food & Beverage
- Transportation
- Forestry/Pulp & Paper
- Retailers
- Municipalities & Governments

Box 7:

Individual Sellers of Ecosystem Services & Group Marketing

Marketing a group of potential ecosystem service sellers has the potential to increase the bargaining power of individual sellers while also decreasing transaction costs for buyers.

For example, in Uganda, Tetra Pak UK, the UK branch of the large multi-national food packaging company, buys around 8,000 tons of carbon credits to offset their emissions. They purchase from a Ugandan NGO that is working with a group of individuals who are re-foresting their land. So, for example, Beatrice Ahimbisibwe, a western Ugandan schoolteacher, is paid to plant trees on her land and create 57 tons of carbon offsets. The company interfaces with brokers, rather than the individuals. This approach makes it simplest for both buyer and seller.

Source: www.ecosystemmarketplace.com

Question #4: Why would this action—buying ecosystem services—be in a company's interest? Or, what is the “value proposition”?

Throughout Step 1, a seller invests time and effort in identifying:

- What they can sell,
- How to measure it, and
- How it would benefit a company.

Throughout this process, the seller should keep in mind that each company is unique. What appeals to one company as a business benefit may not appeal to another, even in the same industry or region. Therefore, the real business benefits of making an investment can only be determined by decision-makers and strategists within the firm itself. The role of the seller is to brainstorm potential business benefits (see Box 8).

Box 8:

Brainstorming Business Benefits: Key Questions

- What raw materials are used by a specific business?
- What companies rely on what infrastructure? Is this infrastructure vulnerable to storm damage or other environmental threats?
- Are there other ways that these businesses might rely on ecosystem services?
- What can the businesses do to eliminate/minimize the threats to the ecosystems they rely on?

While Step 3 below discusses the process for engaging companies in the business case, at this stage, in Step 1, the focus is on brainstorming potential business benefits to begin discussing with a company. Think of it as adding 'grist for the mill', or ideas for the company to think about when valuing an ecosystem service for which they may consider paying.

This step is key since a company that identifies strong business benefits will be more likely to undertake a payment for ecosystem service and/or recommend similar deals to other companies. If benefits cannot be defined, companies are unlikely to act, except through their philanthropy, which is a relatively minor and typically short-term source of investment compared to their mainstream business.

As sellers brainstorm about potential business benefits, the first question should be whether or not a payment for ecosystem service can help a company meet its regulatory requirements. Regulations drive companies to act. A small, but growing number of regulations exist that relate to payments for ecosystem services as summarized in the box below.

Box 9:

Examples of Regulatory Incentives for Corporate Payments for Ecosystem Services

Legal provisions can provide effective incentives for investing in payments for ecosystem services. Some examples of current legal requirements include:

Biodiversity

- Wetland Banking (U.S. Clean Water Act)
- Conservation Banking (U.S. Endangered Species Act)
- Habitats and Birds Directive (EU)
- Offsets for Forest Regulation and National System of Conservation Units (Brazil)
- Federal Law for the Protection of Nature and Landscape (Switzerland)
- New South Wales Green Offsets Scheme and other initiatives (Australia)
- Biodiversity offsets program (Netherlands)
- National Forestry Commission Fund to finance forest ecosystem services (Mexico)

Watershed

- Forest Law 7575–Payments for Ecosystem Services program (Costa Rica)
- Sloping Land Conversion Program (China)
- Forest Ecosystem Compensation Fund (China)
- Safe Drinking Water Act, Clean Water Act (US)

Carbon

- Regional Greenhouse Gas Initiative (U.S. 9 Northeastern and Mid-Atlantic States)
- California Climate Act of 2006 (U.S., State of California)
- Kyoto Protocol to the UN Framework Convention on Climate Change
- New South Wales (NSW) Greenhouse Gas Abatement Scheme (Australia)
- Oregon CO₂ Standard (U.S., State of Oregon)

Multiple Ecosystem Services

- Forest Law 7575–Payments for Ecosystem Services program (Costa Rica)
- EU Environmental Liability Directive (EU)
- Environmental impact/risk analyses required in various planning processes and/or permitting requirements (U.S. and other countries)



Where regulations do not exist, a variety of other business benefits may motivate businesses to invest in ecosystem services voluntarily. In some cases, ecosystem services are strategic issues that could affect core operations and/or future growth. For example, water availability and water quality provide good examples of how ecosystem services can impact operations. A potential seller can ask: Where will the water a company needs to operate come from in the future? Will the source provide reliable rates of flow? Will the source provide high quality water?

In other cases, loss of ecosystem services may create risks for businesses. For utilities, deforestation can increase silt in the river, causing operational problems for their dams.

Ecosystem services are also emerging as an issue for corporate social responsibility (CSR). A growing body of scientific research and number of interested non-governmental organizations are resulting in new expectations for businesses related to ecosystems (see Table 2). For many businesses, investments in ecosystem services offer new management tools for addressing these emergent expectations, as well as a means for innovative leadership in CSR.

Table 2:
Evolving Corporate Social Responsibility (CSR) Expectations

20th Century CSR Paradigm	Emerging 21st Century CSR Paradigm / New Expectations
Environmental regulations will impact the bottom line	Diminished or degraded resources from operations will impact the bottom line, through additional costs in the short-term and diminished ability to win new projects in the long-term
Sustainability focuses on clean air, clean water, less waste, energy efficiency and protection of biodiversity	Sustainability includes protecting an array of “ecosystem services” such as climate regulation, water filtration, flood regulation, crop pollination, and provision of water, fiber, fuel and food. The ethical case for action is growing more mainstream, especially when cast in terms of climate change
Markets focus on internalizing negative externalities	Markets focus on internalizing positive externalities such as provision of clean water
Qualitative description of ecosystem services	Increasingly quantitative descriptions of ecosystem services
No specific carbon expectations	Emerging regulatory requirements for carbon management and expectations for a carbon strategy which may include voluntary purchases of carbon credits
Competitive advantage through cost savings	Competitive advantage from developing expertise on managing risk (i.e., how to avoid ecosystem damages) and maximizing efficient use of ecosystem services –ability to win new projects key
Lenders, insurers, and investors focused on materiality only (i.e., lawsuits, accidents)	Lenders, insurers, and investors adopting environmental screens, Equator Principles and other environmental and social standards
Wetlands mitigation banking requirements relatively narrow	Wetlands mitigation banks need to incorporate consideration of all ecosystem services provided by wetlands, such as water filtration, erosion protection, and flood control—and consider who gets those benefits. Biodiversity offsets also emerging
Contingent environmental liabilities for damages to natural resources	Contingent environmental liabilities in the future may focus on damages to ecosystem services



Box 10:

Building the Business Case for Ecosystem Service Payments

The value proposition for businesses investing in ecosystem services will be company and industry-specific. Think of approaching the business case as an iterative (and interactive) process.



Sellers can also consider potential business benefits derived from the economic value of sustaining ecosystems (see Table 3) and how each business benefit could relate to a potential buyer. To do so, a seller will need to know about a particular company as well as the industry in which it operates. (Appendix B provides a summary of tips for this type of business research, including resources that may help sellers identify emerging issues for a company or an industry.) For multinational companies in particular, internet searches provide a good starting point. Most companies have their own web sites. The internet also provides easy access to media coverage on companies and industries.

The amount of time you spend on industry and company research at this stage is a judgment call. If there are many prospective buyers, then a quick skim of easily available information—from the internet or other local sources—may be all that is needed to assess whether or not there are potential business benefits. If a list of potential business buyers is long, sellers can narrow it down by looking at where business benefits appear strongest and do more thorough research on a short list of potential buyers.

It is important to recognize that any value proposition is only a working hypothesis, or set of assumptions—as only business decision-makers can definitively say what value a PES deal could offer. As a prospective ecosystem service seller gets to know a company (see Step 3, “Get to know a potential buyer”), it is important to continue exploring and refining this business value proposition. How do you describe to people within the company why they should invest in a PES deal? What value will the company derive? These questions are essential to have some basic responses.

If a business disputes the benefits that a seller proposes, then it might be time to find another buyer, or to work with that business to articulate different risks and benefits—ones that mesh with internal corporate perception of their own risks and opportunities.

In successful PES deals, potential buyers themselves recognize the value of investing in ecosystem services.

Brainstorming the business benefits, or the “value proposition”, for private sector companies to invest in PES deals, can be organized around key issue areas, as laid out in the table below.

Table 3:
Evaluating Business Benefits

Business Benefit	Assessing Corporate Value
<p>1) Secure access to new resources <i>(factor for long-term growth)</i></p>	<ul style="list-style-type: none"> • Explore where new resources essential for corporate growth overlap with highly sensitive ecosystems – on the land and in marine settings, such as by drawing on: <ul style="list-style-type: none"> – World Resources Institute data showing that 3/4 of active mine and exploratory sites overlap with areas of high conservation value. • Consider how corporate track records for recognizing and minimizing the impacts increases the ability to win concessions and new projects, such as by drawing on: <ul style="list-style-type: none"> – GSEES Index showing that “The [oil and gas sector] companies with the best social and environmental track record, as measured by the GSEES Index, [derived by Goldman Sachs for the World Bank] dominate the next generation of legacy assets.” (Goldman Sachs Investment Bank, 2004).
<p>2) Secure access to key raw & processed materials <i>(factor for long-term growth)</i></p>	<ul style="list-style-type: none"> • Assess the connection between consistent and high quality supply of water—or other key raw or processed materials—and a healthy ecosystem • Consider whether business growth may be limited by raw material availability • Research corporate case studies, such as: <ul style="list-style-type: none"> – Perrier Vittel’s efforts to protect freshwater.
<p>3) Increase investor confidence</p>	<ul style="list-style-type: none"> • Increasing investor interest in limiting risk through environmental screens, particularly related to corporate climate change strategy (examples include): <ul style="list-style-type: none"> – The World Bank and IFC environmental policies. – Banks, such as Goldman Sachs, Citigroup, HSBC, Bank of America and ABN-AMRO, have new environmental policies (i.e., see web sites of each bank) • Expanding size of socially responsible investment funds (SRIs) which may offer access to key capital over time. • Explore examples of strong corporate responses to emerging issues being rewarded by investors (see “The Economic Value of Corporate Eco-Efficiency” www.sristudies.org/GuensterPaper.pdf).
<p>4) Ensure access to insurance</p>	<ul style="list-style-type: none"> • Consider examples of insurance companies increasing scrutiny of environmental risks, which will result in either increased costs for coverage or even loss of coverage. (see, for example, http://www.allianz.com/en/allianz_group/sustainability/insight/studies_and_reports/page1.html).

<p>5) Enhance or protect brand equity and reputation</p>	<ul style="list-style-type: none"> • Consider cases where ecological damages have hurt a company's brand name and even share price, or where leadership on an issue has created lots of positive media coverage: <ul style="list-style-type: none"> – Smart corporate environmental strategy builds brand equity, as witnessed by the investments by companies such as: Wal-Mart, GE (Eco-imagination), Toyota (hybrids), and Starbucks (sustainable supply chain initiatives).
<p>6) Improve relationships with NGOs (factor for <i>license to operate</i>)</p>	<ul style="list-style-type: none"> • Study increased dialogue and consultation that corporations engage in with NGOs when pursuing environmentally impacting projects. • Assess scientific consensus on the importance of restoring and maintaining ecosystems, with calls by NGOs for significant engagement by the private sector, such as: <ul style="list-style-type: none"> – The Millennium Ecosystem Assessment—by ~1,360 natural and social scientists from 95 countries—noted that the “increasing pressure on ecosystem services will change the expectations of important constituencies.” – The number of NGOs—many of which are focused on ecosystems—has increased to about 51,500 organizations, compared to about 12,000 in the early 1980s.
<p>7) Improve relationships with local governments & communities (factor in <i>license to operate</i>)</p>	<ul style="list-style-type: none"> • Relationships with local governments and communities can significantly affect corporate timelines and costs, <ul style="list-style-type: none"> – In contrast, innovative payments for ecosystem services can create significant goodwill and direct social investments for a company, with the potential to result in shorter and less controversial permit and licensing cycles.
<p>8) Increase customer satisfaction</p>	<ul style="list-style-type: none"> • Consider how customers are using “supply chain management” to demand corporate operations that align with a company's environmental goals (McDonald's, Wal-Mart are just a few such companies actively engaging in supply chain management “around environmental issues”).
<p>9) Increase employee satisfaction</p>	<ul style="list-style-type: none"> • Review examples of higher employee retention at companies with strong environmental records
<p>10) Manage contingent environmental liabilities</p>	<ul style="list-style-type: none"> • Assess examples of companies halting operations due to failure to manage contingent environmental liabilities, such as: <ul style="list-style-type: none"> – With Shell (in Sakhalin, Russia) where the environmental protection agency suspended environmental approvals and the issue of settling environmental non-compliance remains unresolved, including the agency's claim, purportedly for \$10 billion in damage to the Sakhalin land and marine environment charged against Shell's project management. • Review research that compliance and assurance are becoming more complex, such as SustainAbility's work which asserts: “...technical compliance may no longer be an adequate defense against social and environmental activists in the court of public opinion and even in the court of law. Technical innocence or escaping accountability through legal expertise and subtle arguments on points of legal interpretation and precedent are becoming increasingly unacceptable in a society which expects real world performance and behavior standards.” (Geoff Lye and Francesca Müller, SustainAbility Report “The Changing Landscape of Legal Liability”).

<p>11) Lower costs of compliance and better relations with regulators</p>	<ul style="list-style-type: none"> • Review the increasing number of companies acting proactively on ecosystem service issues, particularly on climate change / carbon. • Assess how companies that have a track record of being environmentally-focused can realize lower costs of complying with regulations, such as in: <ul style="list-style-type: none"> – Europe, the United States, Australia, Brazil and other countries with legislation to protect wetlands and/or endangered species. – Brazil's directive protecting native vegetation. – Canada's protection of fisheries. – EU and U.S. state-level climate legislation. – The U.S. Clean Water Act which permits trading to meet water quality guidelines.
<p>12) Enhance R&D (research and development)</p>	<ul style="list-style-type: none"> • Explore examples of how ecosystem services have enabled innovation and/or broadened strategic possibilities, such as: <ul style="list-style-type: none"> – New knowledge about using ecosystem services for water filtration, which saved New York City over \$6 billion dollars. – Research by World Wildlife Fund that bees' pollination services are worth around \$62,000, or 7% of a coffee farm's annual income.
<p>13) Competitive edge, or early identification of emerging issues</p>	<ul style="list-style-type: none"> • Review increasing 'signals' that ecosystem services is an emerging issue, as evidenced by: <ul style="list-style-type: none"> – Media coverage is increasing, particularly within the mainstream business press including <i>The Economist</i>, <i>Fortune</i>, <i>Newsweek</i>, <i>Wall Street Journal</i>, and <i>Business Week</i> – Non-governmental organization interest in the issue is growing, particularly witness an expanded number of initiatives on the topic, such as: <ol style="list-style-type: none"> 1. The World Business Council on Sustainable Development. 2. Business for Social Responsibility. 3. Collaboration between Stanford, World Wildlife Fund and The Nature Conservancy focused on launching an international network of projects that build natural assets and ecosystem services into cost-benefit analyses associated with land use and resource decisions. 4. Private sector foundation. • Assess businesses benefiting from a "first mover advantage"—initiating and publicizing efforts that benefit ecosystems before anyone else in their industry. • Consider actions of key competitors, that may 'up the ante' by successfully managing environmental issues that affect everyone in the industry, thereby necessitating all companies in the industry improve performance, often according to the parameters set out by the market leader.
<p>14) Identify new revenue streams</p>	<ul style="list-style-type: none"> • Wetland mitigation banks, conservation banks, water trading, carbon offsets, and even biodiversity offsets provide potentially new sources of revenue for businesses.

While many businesses will be motivated by risks, individuals within the company will also be able to identify new opportunities. Also remember that obtaining a “license to operate” or building new marketing value into a brand can be extremely valuable to a business, depending on a company or industry’s history, plans for growth, and current positioning. And know that while potential benefits can be difficult to quantify, the more tangible the benefits, the easier it will be to engage a buyer. Examples and case studies can provide concrete evidence.

Overall, identifying potential buyers, and exploring how ecosystem services are of value to the company, is an iterative process that factors in potential business benefits and knowledge of the company as well as the industry (again, see Appendix B for Tips for researching industries and companies).

Ultimately, making the business case will require detailed business analysis that is usually developed with individuals in the private sector. Yet, an early hypothesis about the “value proposition” can help refine ideas, determine who might be receptive, and evaluate whether voluntary action is possible.

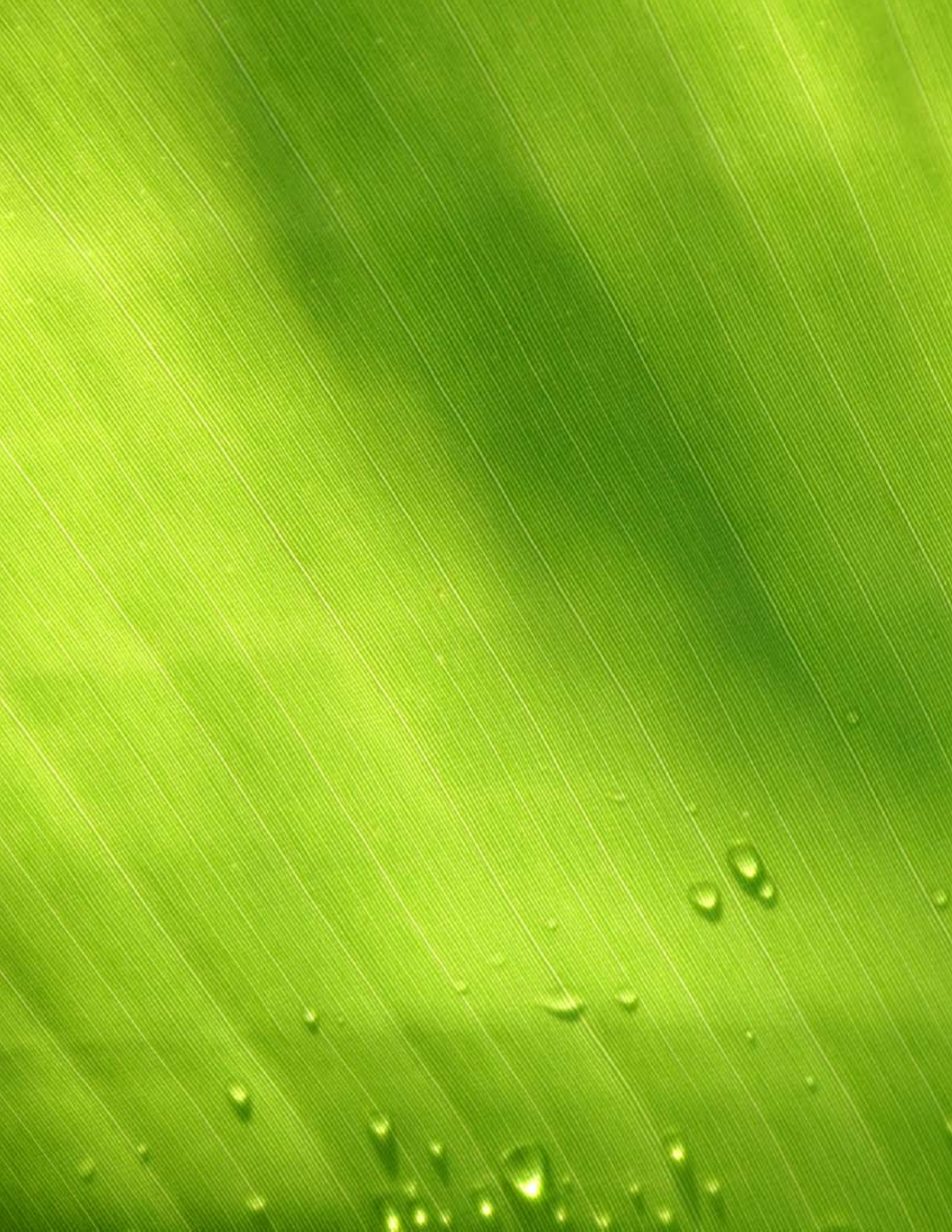
Box 11:

**New Business Opportunities in Real Estate:
Businesses as Sellers of Ecosystem Services**

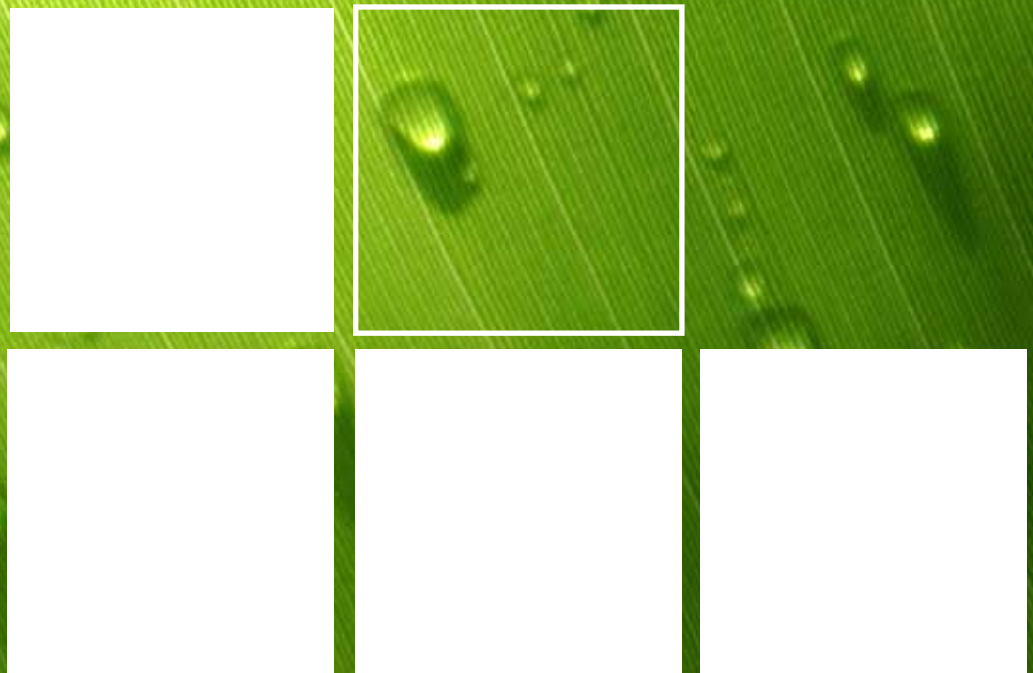
In 2006, Chevron created \$150 million worth of wetlands credits by placing its Paradis wetlands in Louisiana (no longer productive for oil) in a wetland mitigation bank. The company had considered a variety of options for its non-productive land, from building homes and businesses to selling the land. But the property’s elevation averaged six feet below sea level, and percolation tests revealed that it was too weak to support structures. Instead, Chevron realized it could function as a wetland mitigation bank.

Development pressures in the region along Highway 90, the main thoroughfare to New Orleans, are acute. With the supply of mitigation credits in this watershed sparse and the demand for them high, the corporation plans to sell credits for \$20,000 to \$25,000 an acre. The local drainage board remains responsible for managing the land, at a cost of \$20/acre. The project created 7,100 acres, giving Chevron the potential to gross over \$150 million.

Source: Ecosystem Marketplace (www.ecosystemmarketplace.com)



Step 2: Establish Relationships & Rapport





“Practice shifting your mental focus to thinking, ‘When I make this call, I’m going to build a conversation so that a level of trust can emerge allowing us to exchange information back and forth so we can both determine if there’s a fit or not ...’ You must be able to engage people in a natural conversation. Think of it as calling a friend. Let your voice be natural, calm, relaxed...easy-going.”

– Ari Galper, Sales Expert

Beginning a conversation with a company about payments for ecosystem services can be the most challenging step. Some companies or industry associations perceive that the risks of new conversations about issues not currently on their ‘radar’ outweigh the benefits of bringing new ideas and different perspectives into the company. On the other hand, exchanges between the private sector and the non-governmental sector have increased significantly in the last decade. The reactions will vary from company to company, so sellers should be prepared for a range of responses.

This section provides ideas for getting started. It is essential to remember that to ensure a return call sometimes takes simple determination, follow-up and many attempts to make contact. Persisting is key.

As you begin the relationship-building process, a potential ecosystem services seller can ask themselves the following questions:

Question #1: How can I initiate contact with the people within the company or industry sector in which I am interested?

Question #2: Am I building a relationship with individuals at the company?

Question #1: How can I initiate contact with the people within the company or industry sector in which I am interested?

The goal of this step is to make an introduction and get invited back for further telephone discussions, more email exchanges, and ultimately an in-person meeting. Anticipate that establishing a relationship can take several months or even a year to reach a point where trust is built, a relationship established, and in-person meetings with the right people begin. But, relationship-building is a critical first step.

Here are a few tips to use in getting in the door:

Use Introductions:

- Things go more smoothly if you are first introduced by someone who already knows someone in the company or industry. Therefore, contact—through personal conversations, telephone calls, letters, or email—as many people as you can through your existing network of friends and family. Ask if anyone has any contacts in a company or its industry sector. Ask your friends. You may be surprised to learn that your cousin has a friend who works in a company you might approach. Use any introduction you can get.
- Once you have an introduction, the opening line to the business person can be something like, “I’m working on a project and was wondering if you’d be willing to meet with me so I could learn a bit more about your company.”

Contact Board Members:

- Board members make excellent contacts, so review the list of a company’s board members. If you work with an organization that has a board or group of advisors, circulate the list of corporate board members with your advisors to see if there are contacts.

Attend Conferences:

- Attend conferences in the early years of engaging the private sector. All you need to get started is a business card and willingness to introduce yourself, not necessarily a long conversation. The call then goes something like: “Hi Caroline, I’m so-and-so, I attended the conference last November.” [Caroline so far has no idea who you are, but she was at the conference.] “I’m working on a project and was wondering if you’d be willing to meet with me so I could learn a bit more about your [company][industry][etc.]”

Participate in Relevant Meetings:

- Participate in meetings where you will meet the businesses that you are targeting, and where businesses may already be interested in ecosystem services. This approach offers a pre-screened group. The Katoomba Group (www.katoombagroup.org) offers one set of meetings to attend, as well as many other groups convening events focused on payments for ecosystem services.
- Research what meetings are happening, when, and where. The Ecosystem Marketplace (www.ecosystemmarketplace.com) has an online page with lists of

relevant conferences and meetings. After you have decided what is most closely related, then make arrangements to participate.

Consider Timing:

- Call first thing in the morning, just as the business day is starting. Often you can catch someone before meetings begin. They may also be more willing to give you 5 minutes if their day hasn't gotten hectic.

Try Cold Calling:

- If all else fails, then try cold calling. Avoid starting with the public relations representatives. One should be able to at least find the name of a marketing, manufacturing or environmental person within the company.

Explore Corporate Environment, Health & Safety Departments:

- While every company uses its environmental department differently, this department can provide a starting point. Beware, though, of environmental departments that may be primarily focused on public affairs. It is unlikely you will get to the operational team as effectively in those kind of PR-oriented contexts. Other environmental departments, however, are more technical in nature. You will have to ask around and do a bit of research to assess how an environmental unit is deployed within a particular business.

In these early discussions, if you are asked about the nature of your call, you can describe it as: "We're trying to reach out to more people in the business community to learn more about their issues of concern, and to increase understanding of our organization." Never use jargon, technical terms or get into project details at this early stage.

Whenever you make contact, end the exchange with a plan for the next step—try to make it something you initiate so you aren't in a position of waiting for them to contact you.

An introduction made between the head of an organization and someone on the management team can jumpstart any initiative. While not necessary, it is worth exploring whether there are ways to reach a member of the senior management team. Access to individuals within senior management may depend on the size of the company—with smaller companies, it may be possible to meet with people on the senior management team, but less likely with large multinationals where the scale of the business and annual budget may rival the budgets of some countries. Such multinationals are often comprised of different business units, organized by geographic regions or by function, and each having its own leadership team. Business units may be further organized into different divisions.

For example, oil and gas companies may be organized into business segments, such as: (1) exploration and production (assets and operational activities relating to the discovery and production of hydrocarbons); (2) gas, power and renewables (assets and operational activities relating to the marketing of gas and gas-based products and to the development of a renewable energy business); and (3) refining and marketing. Within each of these business segments, different business units represent various geographic regions of the world.

For sellers of ecosystem services, smaller business units or divisions generally provide better access points. And, of course, an exploration and production division will have completely different concerns about biodiversity than a refinery unit, or a business unit in China may have very different environmental concerns than one in India.

The first meeting ...

The first meeting is essential in building a relationship. It should involve much more listening than talking. If good opportunities emerge, or ideas come up, it can be useful to jot them down for discussion at a future meeting. (See Box 12 for ideas on the first meeting.)

At the end, a follow-up meeting could be initiated by saying, “Based on our first meeting, I think there are some areas of joint interest that we should discuss further.” The goal of getting in the door, of course, is to create relationships that may lead to work together and a business deal focused on ecosystem service payments.

Box 12:

Planning the First Meeting

After individual introductions, the meeting should cover:

Information to present:

- Who you are.
- New or recent scientific assessments related to the ecosystem service that is the focus of the potential PES deal.
- Relevant PES projects, ideally with a private sector buyer from the same industry (tell 1 or 2 success stories).

Information to bring to the meeting:

- Key press articles (about your group, ecosystem service issues, your projects, other company's experiences. Mainstream press is particularly effective.)
- (*if you work with a NGO*) Any annual reports or year in review type documents for your group, and lots of business cards.

Questions to ask:

- What are emerging issues for the industry/company? (Research this issue in advance, but at the meeting focus on listening to the company representatives.)
- What are key environmental/ecosystem initiatives to date for the industry/company?
- What is the company's competition doing around environmental/ecosystem issues?
- Are customers or suppliers talking about environmental/ecosystem issues?
- Why were [x product or y project] successful? What, if any, environmental dimensions were important in sourcing, production, or other aspects of getting the product to market? (A seller should know the company's winning products/projects in advance, as well as the overlapping points with key ecosystem services in areas where sourcing raw materials and production occurs.)
- Can you tell me a bit about your chief executive officer (CEO)? Did they come from within the industry or elsewhere? What are his/her key priorities in the coming years? (Ask the same for anyone else mentioned. The intent is to understand if there are ways in which a PES deal could contribute to core corporate goals.)

How to end with a next step:

- We'd love to come back and meet with your group. Could I call next week to set something up?
- Could we come back and focus on [specify particular issues] in another meeting?
- We'd like to bring back [name a person] so you can hear their views. (A scientist is often good to bring in at this point.)
- Would some of your customers or suppliers be willing to talk to us about their emerging issues?
- Can I call you next week to see whether a follow-up meeting makes sense? (If the meeting seems a bit flat, this is one last strategy to ensure some follow-up.)



Question #2: Am I building a relationship with individuals at the company? If I call, will I get a call back promptly?

A common test of the status of whether or not you are successfully building a relationship is if you call the prospective buyer, will you get a return call within a day or two. In addition, as the relationship builds, it is often productive to meet with several different individuals within an organization so you have multiple contacts.

During this stage, it is critical to begin to build trust that will be needed in discussions as you move towards, ideally, an agreement and a contract for an ecosystem service payment. Remember that the process can be long and time intensive as is evident in the case of Perrier Vittel's payments for watershed services illustrates (see Box 13). Step 3 continues this trust-building.

Box 13:

The Long Road to Building Private Sector Supported PES: The Case of Perrier Vittel's Payments for Watershed Services

Starting in 1989, Perrier Vittel (now Nestle Waters) looked for ways to reduce nitrate contamination caused by agricultural intensification in the watershed. Their solution was to finance farmers to change their farming practices and technology.

The first step was a 4-year joint research program between Vittel and the French National Agronomic Institute to understand the relationship between actual farming practices and the nitrate rates in the aquifer, as well as identify and test the practices necessary to reduce the rate of nitrates. Early in the research program, the team worked to establish a successful dialogue with local farmers with the idea of gaining consensus that it might be possible to develop a mutually beneficial partnership between Vittel and the farmers. Farmers' input was key in developing new practices and understanding the incentives necessary to catalyze change.

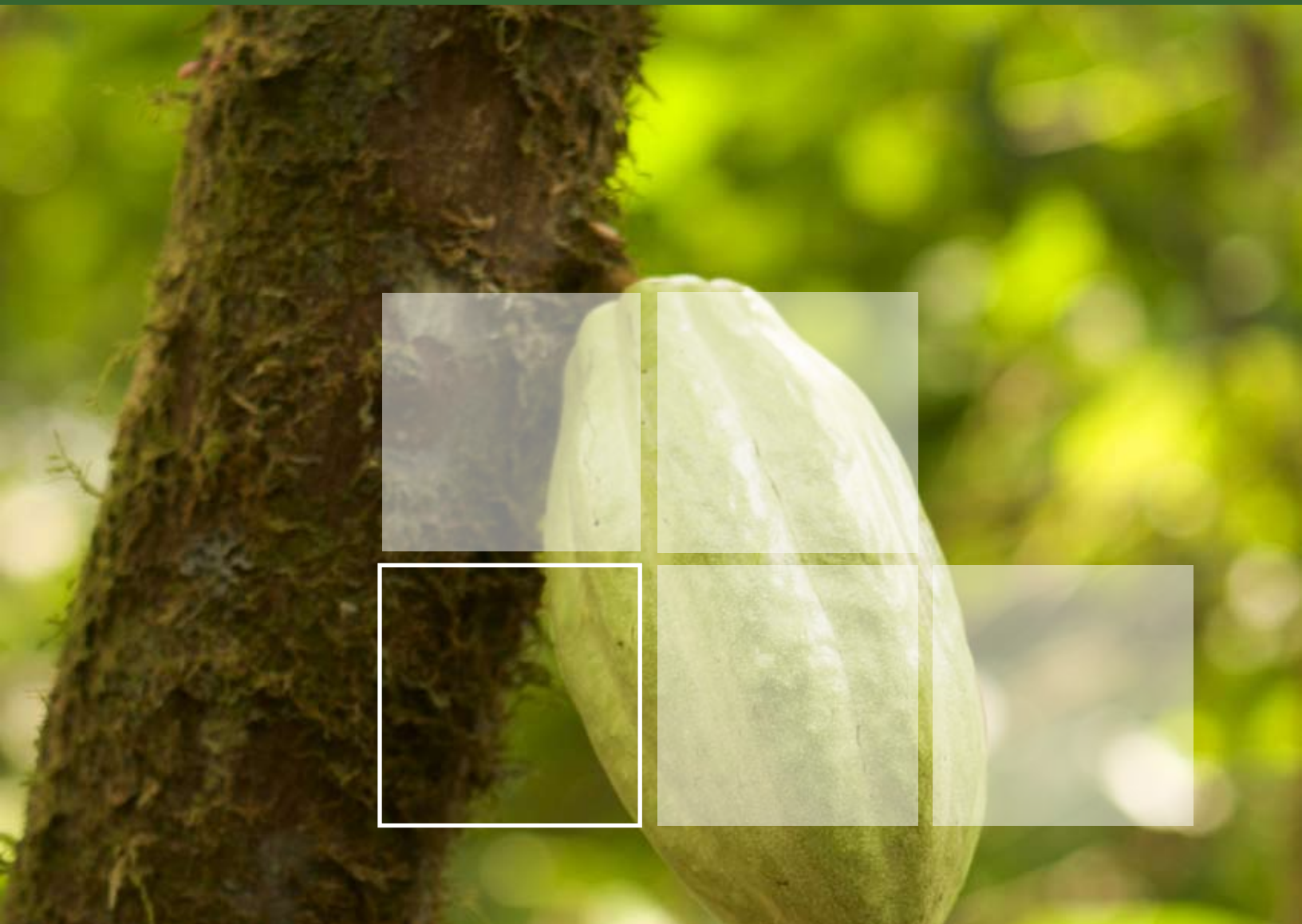
In 1992, Vittel also created Agrivair, an intermediary responsible for negotiating and implementing the PES program with a director who was known to and trusted by both parties. Agrivair spent the next 12 years implementing the program (see source below for details). By 2004, the program was deemed a success with all 26 farms in the key areas adopting a new farming system; 1,700 ha of maize had been eliminated; and 92% of the sub-basin in the watershed was protected.

In an assessment of this PES transaction, the International Institute for Environment and Development concluded that:

"The ability to maintain farmer's income levels and finance all the technological changes was an important element of success, but primary reasons for the program's success were not financial. Trust-building through the creation of an intermediary institution (locally based and led by a "champion" sympathetic to the farmers) and a mutually acceptable set of incentives; the ability to link incentives to land tenure and debt cycle issues and to substitute the old technical and social support networks with new ones were all fundamental conditions of success."

Source: Daniele Perrot-Maitre, "The Vittel payments for ecosystem services: a "perfect" PES case?," International Institute for Environment and Development, September 2006. (<http://www.iied.org/NR/forestry/documents/TheVittelpaymentsforecosystemservices.pdf>)

Step 3: Get to Know a Potential Buyer





At this point, the seller needs to continue building trust while also narrowing in on how a specific ecosystem service—or set of bundled services – can add value to an individual company or local industry. Assumptions and hypotheses about the value of ecosystem services for a business can be tested.

A number of questions can help determine whether payments for ecosystem service are gaining interest within a company or not, such as:

- Question #1: What are the company or industry challenges, needs, hot buttons, and goals?**
- What are some of the challenges that you are facing in your department and with your core business?
 - What issues stand in your way as you work to accomplish your objectives?
 - What issues have the potential to keep you awake at night?
- Question #2: Do the payments for ecosystem services that I am suggesting address these challenges?**
- If so, how?
 - If not, how do I modify my “ask” (and proposed “value proposition” for the business) based on what I have learned?
 - How can I explore potential alternatives during meetings?
- Question #3: Have I been clear with the buyer about my goals and needs?**
- Question #4: Am I talking to the right people and the final decision makers? Are they interested in doing a deal?**

Tips:

- Don't do all the talking. Listen.
- With each contact, leave with a plan for the next step.
- Propose to do joint exploratory work together; such as a visit to a supplier or a facility or a conservation area.



Question #1: What are the company or industry challenges, needs, hot buttons, and goals?

After developing contacts with one or more individuals, this step offers an opportunity for the seller to develop first-hand knowledge of the company and its issues through direct interaction with potential buyers. The seller should seek in-person meetings to learn more about the industry or company as well as to build trust between the different players.

People generally enjoy speaking about their jobs, their business and their industry, so use the opportunity to ask specific, well-considered questions. While the seller wants to avoid wasting the time of an individual in a meeting, it is important to build on your understanding of the company with better information from inside the company. Ask about an individual's career path. Ask a few open-ended questions about the company's goals and challenges. Social events—a dinner out, drinks after work, hiking together, or any activities outside the office—offer important ways to build a relationship. Get to know one another as individuals. Most of all, listen well.

It may be helpful to revisit the hypotheses developed. Investing in ecosystem services can reduce or eliminate risks and, in some circumstances, even create added value. Highlighting specific issues for people within particular division(s) or parts of a company, such as operation and maintenance, may be effective at this stage.

In order to assist in thinking through potential 'interface points' between specific business departments, the following table describes typical departments within businesses and potential risks that they face. For example, the loss of forest cover and increasing flow of soil into a dam area will affect the ongoing operation and maintenance (O&M) of a dam. The people in charge of "O&M" will be much more interested in the short and long-term risks of siltation—the process of a dam filling up with sediment—than others in the company.

Table 4:
Potential Issues of Concern for Different Departments within a Business

Business Department	Potential Risks	Description
Project Development	Permit delays, cancelled projects	For Shell Oil, cost overruns and environmental damages significantly affected its Sakhalin-2 project in Russia. Ecological issues were one of the areas where inadequate information led to poor budgeting and costly project delays.
Operation and Maintenance ("O&M")	Increased maintenance costs or even impacts on product quality.	Loss of forest or other key vegetative cover can lead to soil erosion, loss of filtration capacity, and diminished regulation of water flows. All contribute to O&M issues such as: <ul style="list-style-type: none"> • increased dredging needs for dams and canals, • decreased life of facilities such as dams or wastewater treatment plants, • reduced pest control and protection from diseases, and • (possibly) equipment maintenance problems or product quality issues for water intensive manufacturing processes.
Marketing/ Brand Management	Loss of brand equity	Although the 1989 Exxon Valdez spill was moderate in size (there were at least 10 larger spills in the 10 years after the accident), it took place in a highly sensitive and productive ecosystem. In addition to direct cleanup and damage costs of several billion dollars, an analysis by the Public Interest Research Group suggests that a weakened brand costs Exxon Mobil in excess of \$1 billion a year. When Perrier had to recall several million bottles of its water due to benzene contamination, the cost was \$263 million, but the market share went from 49% to 30% in the UK.
Sales	Loss or gain of customers	Customers' interest in ecosystem services might precede the company's or industries'. And environmental gains have earned companies new customers. For example, Stone Container Company earned new business from McDonald's Corporation in the early 1990s when it was able to incorporate recycled content into its corrugated containers before other corrugated manufacturers. ⁷
Real Estate	Loss of value of land or fines for regulatory violations	In 1991, farm producers lost over \$2 million in income support due to violations of the wetland reserve program. By 2000, that figure had dropped to \$500,000 as farmers found ways to avoid or mitigate damages to wetlands. And of course, land value can be <i>enhanced</i> by managing for wetland and biodiversity values. Chevron transformed an old drilling site into productive wetlands, creating some \$150 million worth of wetland mitigation credits it can sell to others in the area.

Step 3: Get to Know a Potential Buyer

Legal Counsel	Contingent environmental liabilities	Damages to ecosystems can emerge as liabilities for companies under basic tort law – even if current regulations allowed such actions. For example, the EU Directive on Environmental Liability assigns liability to responsible companies for remediation of environmental damages (specifically including biodiversity damage and water damage).
Accounting	New user fees imposed for raw materials	There exists growing interest in quantifying and internalizing the benefits of ecosystems—including making the private sector pay “user fees” for positive externalities provided by environmental services (such as, abundant clean water supplies, flood control—through wetlands and/or other biodiversity—as well as climate regulation).
Strategic Planning	Limits on growth—due to inability to expand, or lack of availability of raw materials	Coca-Cola’s efforts to expand in India were stalled after the government of Kerala province forced Coca-Cola to end operations there due to village allegations that their bottling plant was drying up the local aquifer.
Human Resources	Employee morale adversely affected by company or industry environmental actions and/or reputation	Employees have been known to use slow-downs and other tactics to express concern about environmental problems. Recruitment and retention can also become a problem for companies with poor reputations.
Risk Management	Company is unprepared for new issues of concern	Risk management groups are responsible for assessing future risks for the company. Emerging issues that might get attention from the public, regulators, or even lawyers, most notably include climate change and water issues.

Sources for examples: Ecosystem Marketplace (www.ecosystemmarketplace.com)



This stage can be time consuming, but also critical in terms of building support for how a business or industry can contribute to ecosystem protection. More research on the specific company may be helpful. (For more information on conducting this research, please see Appendix B, which summarizes research tips.)

⁷ Environmental Defense – McDonald’s Waste Reduction Task Force, April 1991.

Question #2: Do the payments for ecosystem services that I am suggesting address specific corporate/business challenges?
If not, how do I modify my 'ask' (and proposed 'value proposition' for the business) based on what I've learned?
How can I explore potential alternatives during meetings?

Each company is unique. What appeals to one company as a business benefit may not appeal to another company, even in the same industry or region.

The work on defining business benefits is vital to testing the potential for closing deals related to ecosystem services. However, given that this 'business case' is developed outside any company, it is directional at best.

In examples of successful payments for ecosystem services, the company owns and embraces the business benefits. When and where that happens is often hard to predict and may take multiple tries with different potential buyers (or investors) to find the right fit.

This step provides an opportunity to discover which of the business benefits identified in Step 1 (see Table 3, pages 22–24) are most compelling to a particular business. Direct and open-ended questions will help you understand the prospective buyer's views. For example:

- Why hasn't the company engaged in payments for ecosystem services before?
- How would you sell ecosystem services internally, within the firm?
- We think the benefits are x, y and z. Do you agree?
- What was your company's reaction to the [*insert example of another company's efforts*]?

Tell as many stories as you can about successful investments in ecosystem services and the experiences of other buyers. The Ecosystem Marketplace (www.ecosystem-marketplace.com) is a place to learn about others' experiences if you do not have first-hand knowledge of specific cases.



Question #3: Have I been clear with the buyer about my goals and needs?

Prospective buyers expect a seller to have their “own agenda” and want to know what it is. Be direct about your environmental and social goals. Buyers might not always agree, but they value clarity and certainty.

For example, if you want to ensure that whatever agreement is made addresses social equity issues, bring these concerns into the conversation early. If you believe that you need to accomplish certain goals like having one buyer with a recognizable name lead others to the table, be direct that your goal is to secure an “anchor” buyer and begin that process.

Some businesses have little or no experience with non-governmental organizations and foundations. If you have financial support from the government or private foundations, explain those financial relationships. Be direct about needs such as “demonstrating results to funders.”

Being direct and clear can help build trust with a potential buyer. If there are going to be awkward conflicts—such as, public critiques of company actions in another area by you or someone at your organization—make sure the prospective buyer hears it from you first.

Throughout the process, the focus should be on creating a good fit between the seller's interests and those of the buyer. After a certain investment of time and energy, there should be emerging signs during this part of the conversation about whether a deal is possible.

Question #4: Am I talking to decision makers and the right people? Am I making progress toward a deal?

Assessing the progress at this stage can provide good feedback about whether the seller of ecosystem services should continue to target this buyer or explore other buyers. Don't be afraid to push for the right people to be at meetings. Ask who will make a decision to invest in ecosystem services and make sure these people attend some of the meetings. At the same time, make sure your own team is as strong as possible.

As discussed earlier, scientists play a key role in communicating why certain actions will benefit the company and improve ecosystems. Scientists can strengthen the weight of the messages being delivered.

This step may also be the time when you abandon a sale. Be prepared to ask yourself:

- Am I making progress with this conversation?
- Are more people in the company getting involved?
- Has the discussion moved out of the Environmental Health & Safety Group or the Environmental Affairs Group (or even Public Relations Department) and into a business unit?
- Is the pace of discussions picking up?
- Do people in the meetings seem engaged?

The industry may be a good fit, but a company may be facing other issues that make innovative programs like investing in ecosystem services unlikely at this time. It may be time to look at approaching other companies in the same sector. Be honest in this assessment.

Step 4: Draft a Sales Proposal





Assuming the conversations with a prospective buyer are making progress and that they are showing more interest, then it's time to put all of the pieces together. Steps 1–3 are intended to provide an opportunity to gather all of the information needed to develop a winning proposal.

At this point, some of the questions to consider include:

- Question #1:** How do I structure the payments for ecosystem service agreement to ensure that I get my desired outcomes? Is the payment type in line with what the buyer wants to see in the final agreement?
- Question #2:** Who do I want working on the initiative within a particular company? Why? And how will I propose and justify these people as “contacts” to the company I am approaching?
- Question #3:** What is my timeline and what are the necessary tasks get an agreement?
- Question #4:** Do I have appropriate parties involved so that the buyer feels comfortable and confident in the deal structure?
- Question #5:** Is the financing in line with what the buyer wants to see in the final agreement?
- Question #6:** Are the ecosystem services quantified to the buyer's satisfaction?
- Question #7:** Has the issue of transaction costs been considered and lessened to the full extent possible?
- Question #8:** What price should I set?



The key now is to ensure that the buyer shares any major concerns that could serve as an obstacle to an agreement.

For example, proposing that a utility might invest in protecting land in a local watershed might have the utility asking, “how can I be sure that the investments will pay off?” If this concern is raised, then you need to bring in more scientific evidence in the final proposal. Alternatively, the potential buyer may embrace the concept of watershed protection, but does not want to invest alone—as only one company. If this concern exists, then a seller should seek to explore who else the company would be comfortable having in the agreement. Together work on a plan to bring others to the table—with your current prospect as the “anchor”—so that the final proposal addresses this concern.

A few other questions can help shape a proposal, including:

Question #1: How do I structure my sale to ensure that I get my desired outcomes? Is the payment type in line with what the buyer wants to see in the final agreement?

Consider and discuss with prospective buyers various payment mechanisms and different types of contracts. For example, buyers could invest by providing direct financial payments to the seller in exchange for certain actions like planting trees. But, they could also invest in community projects—such as building schools or health clinics—to compensate for ecosystem services. Explore what approaches both buyers and sellers would prefer and seek to find common ground.

Remember that ecosystem service deals have a range of potential payment types from which to choose, including:

- Direct financial payments, usually in the case of compensation for lost livelihood incurred by ecosystem service protection, such as for the conversion of managed farmland to natural forest,
- Coverage of costs by buyers, such as for the conversion of degraded land to forest, agroforestry, or tree crops,
- Financial support for specific community goals, such as building of a school or clinic, to remunerate for ecosystem services, and
- In-kind payments, such as increased recognition of land rights and increased participation in decision making processes.

The following table offers a list of alternative levels of compensation for carbon payments.

Box 15: Forms of Compensation

Pay per tree	Rewarding individual tree growers for carbon sequestered and capacity for future carbon sequestration on a per tree basis.
Pay for forest establishment or forest protection	Compensating community forest management organizations to protect or regenerate forest areas, or establish plantations. The community organization is then given financial benefits to distribute among members.
Enable more profitable and sustainable land management	Funding extension services, tree nurseries, marketing infrastructure, community-based forest enterprises, and other such support services for individual producers (or forest protectors) who will then gain financially by participating in new land-use activities or sharing income from forest protection.
Pay communities with improved services	Providing services, such as health clinics, education, or enhanced rights to resources (land, forest, grass, and water) that improve household or community welfare.

Question #2: Who do I want working on the PES agreement within a particular company? Why? And how will I propose and justify these people as “contacts” to company?

Think through and discuss who needs to be involved in getting to an agreement, and then who needs to be involved in ongoing implementation tasks. The important element is that there is a growing basis of trust between the buyer and seller representatives and that all of the individuals involved are truly interested in the agreement. Ensuring both relationships and interest will be key to good communication during implementation.



Question #3: What is my timeline and what tasks need to be completed to arrive at an agreement?

Prospective ecosystem service sellers will need to think about what needs to be done in order to address a buyer’s concerns and reach an agreement. At this stage, sellers also need to think about the implementation of the agreement so that there is discussion early on about how next steps will proceed and who will be involved—particularly if there are transaction costs that need to be covered by the buyer or the seller.

A workplan for getting to an agreement, as well as a separate workplan for the implementation, can be very useful. Neither of these documents needs to be complicated. A handwritten list of tasks, with a guess of how long each task will take (or whether some are ongoing) can clarify what is needed at different stages of the project and how the buyer and seller will work together. For example, tasks might revolve around scientific verification and documentation of the ecosystem service, creating new institutions (such as a new not-for-profit fund or fund manager), details of financial transactions, and so on.

Question #4: Do I have appropriate parties involved so that the buyer feels comfortable and confident in the deal structure?

Third party involvement may help with supporting documentation and financing plans, or simply provide an institutional vehicle for the transactions and a way to document ecosystem services.

For example, a multi-party approach was taken by Cervezeria, a beer brewery in Costa Rica, which is paying the national forest fund of Costa Rica, FONAFIFO, for all activities to protect the watershed above the Barva aquifer. This aquifer feeds a spring, which is the source of the company's water for its beer. While Costa Rica may be unique in having a national mechanism to support payments for ecosystem services, there are other third parties that can facilitate deals.

Certification programs offer another example of the potential role of third parties. For example, the Forest Stewardship Council provides independent third party certification that timber was harvested in ways that maintain the "forest's biodiversity, productivity and ecological processes." Buyers often pay higher prices for FSC-certified timber – the premium in effect goes into maintaining ecosystem services on private lands. Business benefits can be realized from certification. For example, Glenalmond Timber Company Ltd. became certified in 2001 and saw its sales increase by 26%.⁸

Box 16:

Brokers for CO₂ Emissions Reduction

Sales of CO₂ credits often require third party brokers to provide some assurance to buyers, and sometimes even certification under Kyoto protocols.

For example, in Western Uganda, local residents can sign contracts agreeing to sell carbon sequestration credits with ECOTRUST, a Ugandan NGO. The credits come from planting native species of trees. ECOTRUST in turn works with a variety of international organizations (including the Edinburgh Centre for Carbon Management, or ECCM), to facilitate the sales of carbon. A large buyer from ECCM is Tetra Pak UK, a multinational food packaging company. Every year they buy around 8,000 tons from the Ugandan project to offset their emissions.

Other brokers of GHG emissions include:

- NatSource
- Chicago Climate Exchange
- Climate Care
- EcoSecurities
- Evolution Markets LLC
- CO2e

⁸ See www.fsc.org/en/about/case_studies/success_stories/12

Question #5: Is the financing in line with what the buyer wants to see in the final agreement?

Creative financing mechanisms can help close a deal. For many private sector firms, budgets are allocated annually through a complex process of proposals and justifications. Therefore, if you are approaching a company before the annual cycle has been allocated or if there are no clear allocations for ecosystem service payments, then creative financing may be essential to closing an agreement.

Innovative approaches to financing are not uncommon. For example, in the Bahamas, the Island School discovered a way to create carbon credits from using waste vegetable oil from cruise ships to produce biodiesel. The school was able to strike a deal with London-based Climate Care for up-front payment for the right to buy the first 30,000 tons of CO₂ reduction from the project at the rate of \$5.00 per ton. While this rate is lower than the average price per ton paid by Climate Care for emissions reductions, the school got the benefit of money up-front as interest free capital, which they used to buy the biodiesel conversion equipment. In addition, Climate Care took on the task of brokering the credits to buyers.

Another creative financing approach was used by Mexican food and beverage company, Modella (a subsidiary of Corona), which initiated a trust fund to pay landowners for reforestation in the degraded pine forests in the mountains surrounding Mexico City. Bimbo, another food and beverage business, is adopting the same approach.

Finally, innovative financing is possible for ongoing flows of revenues, such as if part of the investment being made is to create conservation areas which could be used for eco-tourism that, in turn, could bring in revenue. In these cases, it is important to explore how, and by whom, these opportunities will be managed over time so that there are no disagreements.

Question #6: Are the ecosystem services quantified to the buyer's satisfaction?

Scientific certainty is not always necessary for the creation of an ecosystem service deal. It all depends on the level of uncertainty that buyers are willing to accept. A few of the key measurement issues for each type of ecosystem service are detailed below.

Carbon Sequestration

Quantifying carbon sequestration and storage over time requires a series of inventories and carbon models. The most commonly used method of developing these models is through remote sensing¹⁰ combined with field collection data and on-site measurements. After an initial survey and "ground-truthing" exercise, future measurements of carbon storage may rely more on remote sensing data than field collection. A number of organizations provide the service of measuring and monitoring carbon stocks on land, and include:

- Winrock International: www.winrock.org
- Environmental Resources Trust: www.ert.net/ecolands
- Edinburgh Centre for Carbon Management: www.eccm.uk.com

Watershed Protection Services

Detailed analyses of watersheds—such as the relationships between forest cover and deforestation on hydrological services—are essential to measure the effects of watershed protection on water services. Water quality and flow are perhaps the easiest components to measure, while other hydrological functions, such as the effects of riparian buffer zones are more difficult. While most watersheds may lack sufficient data on these functions, it may be possible to extrapolate measurements and relationships from similar watersheds where such data is available.

Detailed protocols for undertaking watershed assessments are now being developed by the Australian CSIRO among others, which clearly emphasize the level of technical expertise that is needed to move forward.¹¹

World Resources Institute has developed a site to facilitate trading of nutrients. Specifically, their NutrientNet (www.nutrientnet.org) is designed to:

- Provide potential market participants and other stakeholders with background information on nutrient trading,
- Offer tools to farmers, municipal treatment works, and industrial plants for estimating releases of nutrients to surface waters from their operations, while also exploring reduction options, and estimating the costs of achieving reductions,
- Help market participants identify potential trading partners,

¹⁰ Remote sensing techniques collect data from space or aircraft-based images, which offer "pixel-by-pixel" measurements of the energy reflected back to the earth's surface and classify the reflectance spectra of different substances to distinguish land-cover. The most common satellites used for collecting remotely sensed data are the AVHRR, Landsat, and SPOT.

¹¹ For example see: www.clw.csiro.au/publications/consultancy/2003/MFAT_Technical_Description.pdf#search=%22CSIRO%20watershed%20assessment%20tool%22

Box 17:

Developing Watershed Measurement Tools: The Work Of Australia's CSIRO

Australia's Commonwealth Scientific and Industrial Research Organization (CSIRO), a national scientific research organization, has been leading investigations on ecosystem service deals in Australia since the late 1990's with the Ecosystem Services Project (www.ecosystemsproject.org).

CSIRO's projects consider the biophysical side of ecosystem services in terms of catchments and watersheds. Focal regions include:

- Western Australia, where there are salinity and water logging problems, which affects roads and rails, and
- New South Wales, which is a flat riverine irrigated agriculture region where ground water is rising and there are growing salinity issues.

The work has resulted in tools for assessing and applying market-based instruments to achieve land and watershed goals. For more information see: www.clw.csiro.au or www.ecosystemsproject.org

- Track the volume and type of trades within a watershed,
- Share lessons learned about trading across the watersheds where it is being tried or considered, and
- Provide information on water quality problems and trading as a possible means to address them.

Biodiversity

The ecosystem functions and services provided by biodiversity are the most difficult to quantify because of their scope and complexity. Biodiversity is defined as the variety of life on earth, encompassing the diversity within and among gene pools, species, and ecosystems. It also includes the processes that link these levels together and enable them to function.

Biodiversity forms the foundation of a vast array of ecosystem services, such as: provisioning food, fresh water, and fuel; supporting nutrient cycling and soil formation, and regulating disease, among others. (For more information, please see the United Nations Convention on Biological Diversity at: www.biodiv.org)

Due to the expansiveness and complexity of biodiversity, there is no single agreed upon metric for measurement. However, biologists use many methodologies for assessing biodiversity across structural (type and amount of species) and functional (ecosystem services) levels. Further information can be found through:

- Business and Biodiversity Offset Partnership (www.forest-trends.org/biodiversityoffsetprogram/)
- Foundations of Success and the Conservation Measures Partnership (www.fosonline.org)

Question #7: Has the issue of transaction costs been considered and addressed to the full extent possible?

Transaction costs can be high for all parties within any ecosystem services agreement. At the proposal stage, it is therefore useful to consider how to decrease the transaction costs in ways that would be mutually satisfactory to the seller and prospective buyer. A few other ways in which to consider reducing transactions costs are laid out in the table below.

Table 5:
Institutional Innovations to Reduce Transaction Costs

Institutional Innovation	Activities	Examples
Tap into specialized services through intermediary organizations	Specialized firms or agencies for community-based projects can: <ul style="list-style-type: none"> • Provide technical expertise in project design, • Support negotiations, • Establish mechanisms for financial transfer, and • Verify ecosystem service actions. 	The Nature Conservancy role in brokering forest carbon projects in Belize, Bolivia, and Brazil
Establish intermediary management institutions	<ul style="list-style-type: none"> • Draw up and register farmers' plans related to payments for ecosystem services • Assess plans for ecosystem service contributions • Develop ecosystem service agreements between buyers and sellers • Provide technical assistance • Monitor projects over time 	South African Wattle Growers Union contracts for 600 small-scale producer members to supply international pulp and paper companies
Build on existing community development programs	<ul style="list-style-type: none"> • Train to diagnose local needs, priorities and payment for ecosystem service opportunities 	Farmer and researcher partnership in the Scolel-Te project in Chiapas, Mexico
"Bundle" environmental service payments	<ul style="list-style-type: none"> • Develop multiple payments for different activities on the same piece of land 	Australia's New South Wales state government is seeking to "bundle" carbon, biodiversity, and water services to reforest upland agricultural areas undergoing salinization
Establish large-scale, area-wide projects	<ul style="list-style-type: none"> • Develop projects over entire jurisdictions, committing to defined increases in forest cover or area protected • Partner with other small providers to share transaction costs of project development 	Forestry project in Madhya Pradesh, India is working with 1.2 million households

<p>Create cost-sharing mechanisms</p>	<ul style="list-style-type: none"> Contributions by national or state agency; overseas development assistance, development or environmental NGO, private sector companies, municipal utilities, local communities, etc. 	<p>Australian forest conservation schemes</p> <p>Rice farmers to market 'green' rice at premium</p>
<p>Reduce data costs</p>	<ul style="list-style-type: none"> Improve data and methods for project planning, baseline development and monitoring 	<p>Low-cost participatory carbon monitoring methods, such as those used at the nature conservation's Noel Kempff project in Bolivia</p>

Source: Smith and Scherr, 2002, quoted in The Katoomba Goup and Forest Trends. 2007. "Getting Started with Payments for Ecosystem Services." Washington D.C.

Question #8: What price should I set?

The financial value of ecosystem services can be based on a number of factors. The most compelling are the costs of replacing an ecosystem service, also known as damage estimates.


For example, studies have determined the values of watershed protection, by examining the costs of soil erosion, sedimentation, nutrient loss, and flood damage on local infrastructure. Through these types of estimates, businesses and potential buyers of a service can calculate the cost of not having a service provided or of improving the quality of the service provided.

Obviously, potential buyers have little incentive to make financial value information publicly available, particularly in relation to replacement costs. Yet, intermediaries—such as NGO's or research and academic institutions—can provide approximations of these costs. Another method involves questionnaires asking beneficiaries about their willingness to pay for the continued delivery of a specific service. Such willingness to pay assessments may reveal that these costs are unlikely to be borne by private sector beneficiaries. And the reality is that the price will be what the buyer is willing to pay.

Overall, it is essential to consider that the price for an ecosystem service is derived from a mix of:

- Economic value or the full set of direct and indirect economic benefits of the services from a societal point of view,
- Financial value, which is the actual private financial benefits to different actors, and
- Market or transaction price or the result of negotiation—either at a political level for public payments or private bargaining for private payments—which is partly a reflection of perceived risks and uncertainty as well as bargaining power and the existence of co-benefits.

Ultimately, market demand drives the price of ecosystem services. And therefore the take home message is that theoretical economic valuation does not equal market pricing (see Box 18).



Overall assessing the financial side of an ecosystem services deal requires the supplier or seller to understand the opportunity cost of entering into the agreement. In addition, the costs for complying with the land management practices over time should be compared with the incoming revenue and administration costs. This set of issues relates to the long-term sustainability of ecosystem services deals over time, which must be considered in order to ensure longevity of projects and therefore agreements that are adhered to by all parties. If the market price that is offered does not cover the costs of the land management that will be provided, the deal is not at best advisable.

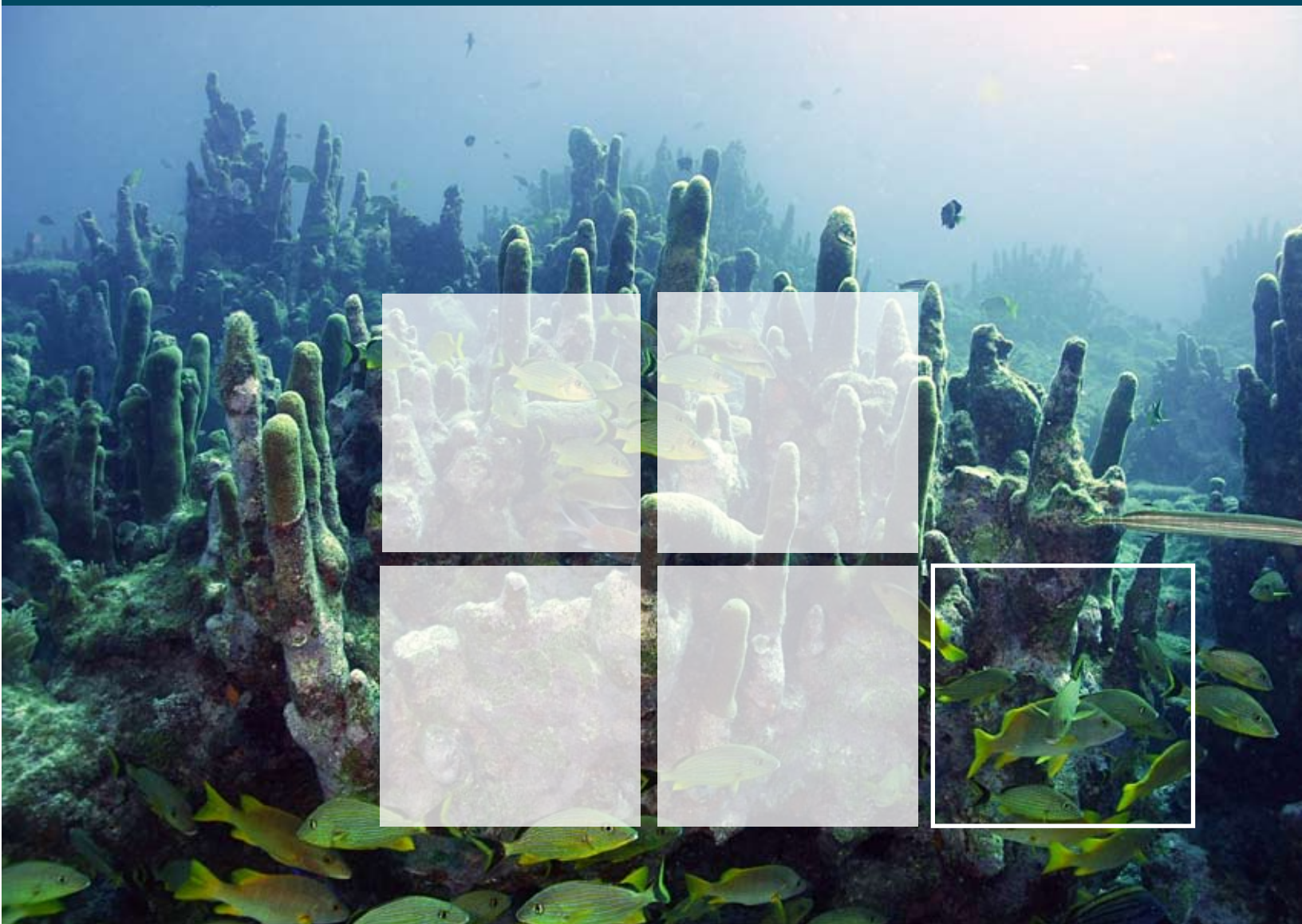
Box 18:

Market Demand = Ecosystem Service Pricing

To know what ecosystem services are worth in terms of prices within PES deals, it is best to refer to actual market deals, ideally as similar a deal as possible. Many factors determine the price that buyers are willing to pay for an ecosystem service (as well as the price at which a seller is willing to sell the service). The degree of competition in both supply and demand, for instance, is one of the factors that will help determine the prices paid for these services. Buyers will tend to seek the lowest-cost suppliers of services. In most current ecosystem services markets, potential supply far outstrips market demand, suggesting that prices will typically be fairly low.

In the end, however, it is “market value,” the complex relationship between supply and demand, not estimated financial value, which will determine the price that producers will be able to get for an ecosystem service. In some cases (and these may be rare), valuation studies can help generate demand for a service, but in no case should these studies be confused with the actual price of an ecosystem service.

Step 5: Structure the Agreement & Finalize the Deal





The process of structuring agreements is time-consuming and requires carefully thinking through many issues that both parties will have to live with for many years to come. Key decisions and issues to keep in mind through the agreement structuring process include:

- **Selecting a contract type:** There are many types of contracts from which to choose. Any of these contracts can be made flexible to allow for adaptive management in which some elements of the agreement can be modified as the buyers and sellers learn more over time and new issues arise.
- **Assessing if objectives / results required are realistic and can be achieved:** It is extremely important to make promises that can be fulfilled. Frustration and mistrust can be lethal to any project. It is good to be bold, enthusiastic and proactive as long as potential limitations are well understood. Sellers need to consider what they are agreeing to carefully as agreements for ecosystem services often have multi-year, even multi-decade, timeframes.
- **Considering whether senior corporate support is needed:** Finally, in completing the deal, it is always important to ask: Do we have senior management interest and support? If not, do we need it? And how can we develop senior management support?

If the initiative is large enough that senior management needs to be involved, a prospective seller can offer to help brief senior management. An event announcing the agreement can also be used to bring more senior managers into the process if other strategies have failed.

- **Asking for help and advice:** Throughout the process, consulting with external experts and advisors can be useful to ensure that the agreements are entered into knowledgeably on all sides, particularly given that ecosystem service deals often take place over long periods of time (10–40 years) based on the service and the contract agreement.
- **Planning for the future of the agreement:** The extended time periods of eco-system service deals mean that business plans must include provisions for the expected transfer of management over time. Project management that is planned from the outset to adapt to the results of monitoring and periodic verification will be a key factor in ensuring that the agreement is successful over time.

After all of these elements are worked out and put into an agreement, then the deal can be finalized and move into implementation.

A companion resource guide—“Getting Started: An Introduction to Payments for Ecosystem Services”—provides details on many key aspects of ecosystem service deals. In particular, the process of initiating the project after an agreement is signed, verifying delivery of services and benefits, and monitoring and evaluating the project are all issues touched on by this companion primer. For more information on the “Getting Started” and payments for ecosystem services, please see: The Forest Trends Website (www.forest-trends.org) and the ‘PES Tools’ section of the Katoomba Group website (www.katoombagroup.org).





Conclusion

The Value of an Honest Broker

Building business relationships around payments for ecosystem services requires significant investment of time and resources, which can be trying for a potential seller who is focused on ensuring that his or her family has food every day. Therefore, the most feasible approach may be for community-based and/or community-focused nonprofit organizations to play a role in many of these steps, such as:

Step 1: Helping sellers assess an ecosystem service 'product' and its value to prospective buyers, through identifying and documenting:

- What ecosystem services may be available to sell,
- How much exists,
- What the market context is (such as, regulated or voluntary),
- What business case exists for a company to invest, and
- What value the ecosystem service has and what market price has been paid (ideally based on comparative prices from the same area).

Step 2: Assisting sellers with establishing relationships and rapport with potential buyers, through:

- Developing a list of potential buyers,
- Setting up meetings between prospective sellers and buyers, and
- Facilitating meetings to ensure that expectations of both buyers and sellers are met.

Step 3: Enabling sellers get to know potential buyer(s) well, by ensuring that meetings reveal key details, such as:

- Prices paid for comparable payments for ecosystem services (and why these are the prices),
- Buyer's views on potential business benefits, and risks, of entering into agreements and making payments for ecosystem services, and
- Challenges being faced by the company that may inform their interest and price sensitivity related to a purchase.

Step 4: Assisting with proposal development, by:

- Quantifying ecosystem services to ensure appeal to buyers,
- Pricing of services,
- Addressing, and lessening as much as possible, transaction costs,
- Structuring agreements,
- Selecting a payment type that interests both seller and buyer,
- Assessing various approaches to financing,
- Identifying and getting agreement on corporate point people, and
- Keeping the discussions in motion.

Key support services that may be useful in developing PES deals are laid out in Table 6.

Table 6:
Business and Technical Support Services
for Implementation of Payments for Ecosystem Services

Service	Description	Provider	Example
Measurement	Determination of value of ecosystem service	NGOs, business firms	Ecolands www.ert.net
Financing	Provision of necessary capital/ operating funds to implement activities	Banks, multilateral investment banks, business firms, foundations/trust funds, NGOs	BioCarbon Fund www.carbonfinance.org/ biocarbon
Business Development	Development of business plans	NGOs, business firms	Technoserve www.technoserve.org
Technical Assistance for Improved Land and Resource Management	Expertise on designing and implementing new and improved forest management regimes	NGOs, business firms	Winrock International www.winrock.org Trexler and Associates, Inc. www.climateservices.com
Monitoring	Regular collection and analysis of ecosystem service data to ensure accountability	NGOs, business firms	Edinburgh Centre for Climate Management www.eccm.uk.com
Insurance	Protection from risk and compensation for loss	Insurance companies, banks, business firms	Swiss Re www.swissre.com
Legal Services	Financial and legal advice	NGOs, business firms	Baker & Makenzie www.bakernet.com
Technical Assistance on Marketing	Expertise on the state of the market and points of access	NGOs, business firms	Ecosecurities Ltd. www.ecosecrites.com
Verification	Process of review to ensure accuracy of information	NGOs, business firms	Less Carbon www.less-carbon.com
Certification	Examination of service/ product according to set of guidelines	NGOs, business firms	Scientific Certification Systems www.scscertified.com Societe Generale de Surveillance www.sgs.nl/agro/pages/ carbonoffset.asp
Registries	Collection and configuration of information within a database	NGOs, public agencies	Environmental Resources Trust (GHG Registry) www.ert.net

Negotiating For Nature's Services



Throughout the process of building PES relationships with the private sector, intermediaries acting as honest brokers have the potential to play an enormous enabling role. And in this role, NGOs and community-based organizations can help to unleash new streams of revenue for the conservation of ecosystems and the services that they provide us all.





Resources

Appendix A: Examples of Business Investments in Ecosystem Services

The website www.ecosystemmarketplace.com includes examples of businesses purchasing ecosystem services, such as:

Australia:

In the mining sector, the Xstrata Plc's Mount Owen coal mine in New South Wales, Australia is using a biodiversity offset strategy and conservation program to mitigate the impact of its mine extension. Mount Owen's won approval for its application to extend its mining area which will disturb an additional 35 hectares of the Ravensworth State Forest and 59 hectares of open woodland outside the forest.

According to Mount Owen Mine General Manager, Derek Walls, "this strategy compensates for the disturbance of vegetation communities within the project area through the conservation of 415 hectares in offset areas adjoining the Ravensworth State Forest and our New Forest area and in the end we will create a woodland that is almost five times its original size." The extension will also provide 21 more years of mining for the company.

Chile:

Individuals in Chile have invested in Private Protected Areas primarily for conservation purposes and high-biodiversity vacation spots. Payments have been voluntary and driven by a desire to complement government conservation of critical habitat.

Costa Rica:

One of the best examples of a "mature" payment for ecosystem services initiative is in Costa Rica where the Forestry Law 7575 (passed in 1996) established the Costa Rican Payment for Ecosystem Services (PSA) program in an effort to protect their tropical forests. The Ministry of the Environment established the "FONAFIFO" (Fondo Nacional de Financiamiento Forestal) to implement this national PSA program. FONAFIFO recognizes four major types of ecosystem services that are offered by the country's tropical forests:

- Greenhouse gas mitigation,
- Watershed protection,
- Biodiversity conservation, and
- Preservation of scenic beauty.

These four services create a single bundle which reflects the aggregate ecological value of a given forested area.

FONAFIFO receives \$10 per hectare per year in private funds from businesses interested in protecting hydrologic services in an area. Buyers include Hydroelectric companies such as Energia Global, Hidroelectrica Platanar and Compania Nacional Fuerza y Luz, a beer brewing company, and Florida Ice & Farm. The World Bank has also contributed to the fund. These funds are matched with government funds from a fossil fuels tax.

FONAFIFO uses this income to establish five-year contracts with private land owners to pay them for the bundle of ecosystem services (water, carbon, biodiversity, and scenic beauty) provided by forestry conservation efforts. The transactions between FONAFIFO and the service providers remain relatively straight-forward, as the forest landowners will always receive a fixed compensation for the whole bundle of ecosystem services. Private landowners receive payments twice yearly. These payments are for approximately \$40/ha/year for forest preservation and over \$500/ha over a five year period for new forest plantations. Over 7,000 private land owners have signed contracts to conserve or reforest their land.

Bilateral agreements also take place in Costa Rica outside of FONAFIFO's efforts. For example, in the province of Heredia, a public water utility has installed a tariff on its water bill in order to contribute to the conservation of the watershed.

Market intermediaries play a significant role in facilitating the various contracts. Several regional organizations (both governmental and non-governmental) also play an important role in the development of the market. Buyers usually pay a fee to the intermediary in addition to the \$10/ha/year that goes to the seller. SINAC (National System of Conservation Areas) and FUNDECOR (Central Volcanic Range Development Fund – Conservation NGO) are responsible for finding sellers and monitoring the implementation of the conservation/reforestation efforts. (For more information see www.ecosystemmarketplace.com).

Mexico:

The Mexican Government funds a program to pay for protection of watersheds to provide hydrological services. The program focuses on paying forest owners to maintain and preserve forest cover. Forest owners in any state of the republic can apply to participate in the program provided that they meet eligibility criteria. The National Forestry Commission signs a Letter of Intent (contract) with a land owner that can be renewed yearly over a period of 5 years. The first payment is made within 16 working days of signing the contract and subsequent payments are made at the end of the calendar year, based upon a satellite photo and random site inspections.

The seller is required to not deforest the land, to guard over outside sources of deforestation, to advise the buyer of any unforeseen changes to land cover in the area and to allow monitoring of the land by the Program. The contract stipulates that if the expected land management and conservation does not take place, the buyer (government program) is not required to pay the forest owner, and continued participation in the program is terminated for that contract. Further, the forest owner cannot reapply for a new contract in subsequent phases of the program.

The price paid to the land owner has been determined by the government based on the opportunity cost of use of the land, assuming that earnings from corn production would be the alternative activity on the land. The price of ~\$30/ha or ~\$36/ha is an average of the corn productivity of land in the areas contracted and the different quality of hydrologic benefits derived from the relationship between forest type and water quality benefits. Thus, cloud forests/mesofilous forests receive higher payments (~US\$36/ha) and temperate forests receive (~US\$30/ha).

The Government's Payment for Environmental Services Program is the current buyer, but as the watershed benefits materialize, the Program will work to sell those benefits to local private buyers, while still hiring contractors or consultants to carry out monitoring work and forest assessment.





Appendix B: Tips for Researching Industries and Companies

Internet searches provide a good starting point for researching companies and industries. Most companies have their own web sites and most industries have an association, also with web material. The internet provides easy access to media coverage of companies and industries.

Other available resources include:

I. Information generated by companies or industries

Annual Reports

An annual report includes statements of financial operations and a description of the company's operations. This is usually a sleek, colorful, high gloss publication. Try to look beyond the marketing and evaluate the overall direction of the company. It also lists the Board of Directors and Management Team which should be reviewed on the off-chance there is a personal connection with any individual.

Some sites provide tips on reading annual reports such as: "Understanding a Shareholder report: 5 Tips: Reading An Annual Report," at www.money.cnn.com/2004/03/03/pf/saving/willis_tips/

In addition to company websites, see:

- www.prars.com/
- www.annualreportservice.com/
- www.reportgallery.com/
- www.zpub.com/sf/ar//index.html

For U.S. Stock Market Exchange Companies–10-K Form

A 10-K is a version of the annual report which gets submitted to the Securities Exchange Commission (SEC) for any company that trades on a U.S. stock market exchange. It contains detailed information and often discusses problem areas in more detail. It can be much more useful than an annual report, but is a bit thicker to wade through.

Call the company or check its website.

See SEC website: <http://www.sec.gov/edgar.shtml>

Industry Associations

Staff from trade associations will generally be willing to talk to potential sellers, but of course their primary responsibility is to protect the interests of their member companies. In some cases, the association might be the seller's target for engaging in a project.

II. Sources of information from outside parties

Local business reporters

Contact local papers or even radio stations to speak to reporters that cover industries or companies.

General business journals

For example, *The Economist*, *Fortune*, *Forbes*, *Newsweek*, *Business Week*.

Industry specific journals

Often available in a business library, through a University or public library.

Local non-governmental organizations (NGOs)

NGOs focused on labor issues or healthcare may have had interactions with local businesses on a range of different issues and may be able to provide insights on a company or industry

Junior staff in a company

Use personal contacts to find anyone who is part of an industry, its suppliers or its customers to provide inside views of issues and challenges.

Accounting firms or Business Management Consulting firms

(such as Deloitte and Touche, Accenture, McKinsey, Price Waterhouse Coopers, Monitor)

Firms may be willing to discuss overall issues in different industries, especially if the seller can find a personal contact.

Research analysts in investment banks

While difficult to access, analysts' knowledge of an industry can be invaluable.

Analyst reports

Detailed analyses of an industry can be purchased. For example, RISI (<http://www.risiinfo.com/corporate/do/welcome>) provides excellent reports on the global forest products industry. Occasionally a library will have copies.



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**F O R E S T
T R E N D S**

Forest Trends is an international non-profit organization that works to expand the value of forests to society; to promote sustainable forest management and conservation by creating and capturing market values for ecosystem services; to support innovative projects and companies that are developing these new markets; and to enhance the livelihoods of local communities living in and around those forests. We analyze strategic market and policy issues, catalyze connections between forward-looking producers, communities and investors, and develop new financial tools to help markets work for conservation and people. www.forest-trends.org

the katoomba group

The Katoomba Group seeks to address key challenges for developing markets for ecosystem services, from enabling legislation to establishment of new market institutions, to strategies of pricing and marketing, and performance monitoring. It seeks to achieve the goal through strategic partnerships for analysis, information-sharing, investment, market services and policy advocacy. The Katoomba Group includes over 180 experts and practitioners from around the world representing a unique range of experience in business finance, policy, research and advocacy. www.katoombagroup.org

THE KATOOMBA GROUP'S

Ecosystem Marketplace

The Ecosystem Marketplace seeks to become the world's leading source of information on markets and payment schemes for ecosystem services (services such as water quality, carbon sequestration and biodiversity). We believe that by providing reliable information on prices, regulation, science, and other market-relevant factors, markets for ecosystem services will one day become a fundamental part of our economic system, helping give value to environmental services that, for too long, have been taken for granted. In providing useful market information, we hope not only to facilitate transactions (thereby lowering transaction costs), but also to catalyze new thinking, spur the development of new markets, and achieve effective and equitable nature conservation. The Ecosystem Marketplace is a project of Forest Trends. www.ecosystemmarketplace.com