

**Conservation Incentive Agreements:
An Introduction and Lessons Learned to Date**

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CHAPTER 1: CONSERVATION INCENTIVE AGREEMENTS

Introduction

Conservation of biodiversity-rich habitats presents a challenge to nations wishing to develop their natural resources for economic ends. Logging, mining, grazing, agriculture and other resource-development activities offer the prospect of tangible economic benefits but are often environmentally destructive. To address this problem, Conservation International (CI) has been working to develop the concept of a "conservation incentive agreement," a novel approach that seeks to directly reconcile resource protection with development.

Conservation incentive agreements hold potential to protect a wide variety of terrestrial and marine habitats, ranging from vast tracts of Amazonian rain forest to coral reefs in the South Pacific. The tool may also be used to protect the habitat of particular threatened or endangered species, such as the Asian elephant, American mahogany, or Thick-billed Parrots in the mountains of northern Mexico.

Under a conservation incentive agreement, national authorities, communities, or individual resource owners agree to protect natural ecosystems in exchange for a steady stream of structured compensation from conservationists or other investors. In its simplest form, a conservation incentive agreement might be modeled after a timber concession, whereby a logging company pays the government for the right to extract timber from an area of public forestland. Rather than log the concession area, the conservation investor would pay the government for the right to preserve the forest intact. A conservation incentive agreement thus presents an alternative opportunity for countries to capitalize on vast tracks of forest or other areas of high conservation value. With ultimate objectives that include long-term protection of biodiversity *and* economic development, this new mechanism offers a land use alternative that conservationists, development agencies, governments, and local communities alike can support.

Efforts to date to establish conservation incentive agreements have met with success in a number of countries. In Peru, the government included provisions in its 2000 revision of the Forest and Wildlife Law that for the first time enable conservationists to compete for land-use rights in its 72-million hectare forest estate. In July 2001, the country's first conservation concession under this law was granted to the Amazon Conservation Association, a Peruvian NGO. In July 2002, CI signed a 30-year agreement with the Government of Guyana to establish a conservation concession that protects approximately 80,000 hectares of pristine forest. Since then, projects have been initiated by a number of international conservation organizations in more than a dozen different countries around the world.

This document draws on experience accumulated since 1999 to present the rationale of the approach, emphasize its wide applicability, and offer some practical guidelines for implementation. The main body of this document is not intended to be a detailed instruction manual, but rather serves as an introduction to the topic informed by early experiences. The Annex following the main body provides step-by-step guidance for the design and implementation of incentive agreements, informed by the cumulative experience of CI's

Conservation Economics and Conservation Stewards Programs. The following section further explains the approach, using the conservation concession in Guyana as an example. Our initial thinking in developing the model focused on presenting a competitive alternative to logging concessions on government lands, but it soon became apparent that incentive agreements offer a flexible tool that can be applied in many settings. Therefore the remainder of this first chapter also describes the suitability of the model in different tenure contexts, reflecting the flexibility of the approach that has become apparent through work on a varied portfolio of projects. Chapter 2 provides an extended discussion of an area in which we have focused much of our effort while initiating this portfolio of pilot projects, namely enabling conditions and site selection criteria for establishing new agreements. In the final chapter we present some examples of ongoing incentive agreement projects, and conclude by discussing lessons learned to date and requirements for broader application of this approach in the future.

Evolution of Conservation Incentive Agreements

CI first used the conservation incentive agreement approach in Guyana, in a project that started in 1999. This effort followed the observation that logging companies in Guyana could acquire large timber concessions at a very low cost, as is true on hundreds of millions of hectares of forest around the world. This suggested that a conservation organization might be able to afford a timber concession without intending to log. The effort to obtain a 'conservation concession' in Guyana followed the formal process for obtaining a timber concession (or 'timber sales agreement' as they are known in Guyana), which includes a timber inventory, the development of a management plan, and an initial exploratory permit. The agreement that was ultimately signed in 2002 closely resembles a standard logging agreement, with a contractual obligation to pay the government the same taxes and fees. The only difference is that the area is managed for conservation instead of timber.

An important motivation for attempting this approach in Guyana was the stark dichotomy between the lack of results from years of effort to create protected areas in the country and the government's willingness to lease tens of millions of hectares of forest for logging. By explicitly addressing the costs of conservation management, the conservation concession has helped to demonstrate that the international community is willing to fund conservation in the country on a par with other options for economic development.

The Guyana conservation concession is an agreement with the national government that involves direct payments in return for the right to conserve a particular area of land. Since this first agreement was signed, we have found that the incentive agreement approach holds much promise in a wide variety of other contexts, including areas such as private or indigenous lands where conventional protected areas might be difficult or impossible to establish. We have also found that effective incentives in many situations, especially those involving rural communities in remote areas, can take the form of funding for social services such as health and education, rather than only direct cash payments. This flexibility, which is one of the most important strengths of this approach, allows conservation incentive agreements to be tailored to fit the needs of a given situation.

A conservation incentive agreement directly compensates local stakeholders and relevant government bodies for conservation services. National resource authorities and local resource users forego destructive exploitation of areas of habitat in return for a reliable flow of structured benefits, under a negotiated agreement. The agreement specifies an explicit *quid-pro-quo* of regularly scheduled compensation in return for conservation performance based on measurable indicators. The specific parties included in a given agreement will vary depending on the context.

If the area to be conserved is privately owned, the agreement may involve only the conservation investor and the landowner. An agreement covering government-owned land will involve relevant ministries and departments. Areas under traditional or customary land-tenure systems require agreements with indigenous communities. Often, areas of conservation interest fall under several overlapping ownership or use-right arrangements, in which case it may be necessary to establish agreements with multiple stakeholders for a single site.

Negotiated elements of conservation incentive agreements include the amount of compensation for protection of the area in question, what form this compensation will take, and provisions for the cost of management activities such as monitoring and enforcing natural resource protection. Agreements must also define rules governing conservation management and resource use, as well as indicators for measuring compliance and penalties for non-compliance. These performance indicators are essential to effective agreements, since the benefits to be provided by the conservation investor under the agreement will only continue for as long as conservation services are being provided. Thus, benefits are contingent on verified delivery of conservation outcomes.

Conservation incentive agreements avoid or minimize the need for new legislation by using agreements and contracts similar to those used to establish leases for logging, mining, or other resource development. Because land leases and resource concessions are in use all over the world, conservation incentive agreements are not a radical departure from the kinds of transactions with which governments and other resource owners are well acquainted. However, the fact that provision of biodiversity services can generate direct benefits through compensation *does* represent a marked departure from commonly-used indirect conservation approaches in which conservation is sought as a byproduct of other activities.

Two such indirect strategies stand in particular contrast to conservation incentive agreements – projects based on sustainable production, and integrated conservation and development projects, or ICDPs (which can be viewed as a subset of the former). Sustainable production often is advanced as an alternative to protected areas, on the basis of arguments that income from economic use is needed to justify conservation. ICDPs are motivated by a similar perspective, but are typically more community-oriented, seeking to promote sustainable use and stewardship by making income/benefits dependent on environmentally compatible resource use and extraction. Thus, sustainable production and ICDPs by design include inherent tensions between maximization of income, particularly in the short term, and conservation of the resource base.

A balance between conservation and income generation, as embodied in sustainable resource use models, may seem like a sensible compromise, but in practice sustainable resource management rarely succeeds (Robinson 1993; Simpson & Sedjo 1996; Kiker & Putz 1997; Swallow & Sedjo 2000; Ferraro 2001; Hardner & Rice 2002; Sedjo & Swallow 2002; van Schaik & Rijksen 2002; McShane & Wells 2004; Niesten & Rice 2004; Niesten *et al.* 2004a; Ferraro *et al.* 2005). In most developing countries, economic and institutional conditions are not conducive to the sacrifice of short-term income for uncertain benefits in the future that characterizes sustainable management models (Ferraro & Simpson 2001; Ferraro & Simpson 2002). Moreover, the benefits from sustainable resource management practices are typically less than those from conventional management, so the private sector has been almost universally reluctant to adopt them (Rice *et al.* 1997; Rice *et al.* 2001; Ferraro *et al.* 2005). Similarly, the financial and political costs to government of enforcing sustainable management techniques also tend to be prohibitive. Finally, regardless of financial viability (or lack thereof), the level of conservation achieved through sustainable resource management is inherently compromised given that resource use of any kind necessarily implies some pressure on ecosystems (Terborgh & van Schaik 1997; Struhsaker 1997, 1998; Wells *et al.* 1999; Niesten *et al.* 2004b; Ferraro & Simpson 2005).

Indirect approaches to biodiversity conservation such as carbon sequestration, sustainable forest management, agroforestry, and even ecotourism, fail to address the root cause of biodiversity loss, namely the missing market for biodiversity (Landell-Mills & Porras 2002; Pagiola *et al.* 2002). Natural habitat and biodiversity represent several forms of value, which together comprise Total Economic Value, or TEV (Barbier 1991; Pearce & Moran 1994). Many components of TEV, such as indirect use values associated with environmental services like watershed protection and biodiversity maintenance, are not reflected in market prices that influence resource use – hence the ‘missing market’. For instance, since market prices for forested areas typically do not reflect their value as biodiversity habitat, this value is often disregarded by decision-makers, leading to insufficient habitat protection (Nielsen *et al.* 2004a).

Direct compensation in return for biodiversity conservation can counteract the missing market for conservation, but remains a rarity among conservation projects. At present, conservation is usually sought as a byproduct of some other activity that often generates continued habitat pressure (Nielsen & Rice 2006). In contrast, a critical feature of direct incentives for conservation is that income does not depend on habitat modification and natural resource extraction, but instead becomes a function of successful conservation. Incentive agreements seek to address the missing market for biodiversity conservation by providing direct compensation in return for conservation services, thus avoiding the tension between conservation and habitat pressure that characterizes indirect approaches (Hardner & Rice 2002; Ferraro & Kiss 2002).

Flexibility of Conservation Incentive Agreements

As noted, a key characteristic of conservation incentive agreements is their flexibility. In many contexts, conventional conservation tools such as national parks and sustainable resource management may be limited in scope and effectiveness by various factors. For instance, particular tenure contexts such as private or indigenous land may make it difficult, if not impossible, to establish a formal protected area. Likewise, institutional and economic conditions undermine the viability of many sustainable resource use initiatives. The flexibility of incentive agreements, on the other hand, allows them to be adapted to a wide variety of settings, including many where other tools cannot be applied. Conservation incentive agreements can be tailored to many different circumstances with respect to ecological settings, legal systems, social and cultural contexts, and economic drivers of threats to natural habitat. One particularly powerful dimension of the flexibility of the approach is its applicability in different land tenure contexts, as discussed below.

Public Lands

While most of the world’s terrestrial and marine resources are under government ownership, only a small fraction of these areas are zoned for conservation. In this context, traditional protected areas such as national parks can be extremely effective. However, in settings where the potential for expanding protected areas is limited by political or economic considerations, conservation incentive agreements may offer a promising and complementary alternative.

The current generally accepted international standard is to set aside 12 percent of public lands for conservation. At present, 11.5 percent of the world’s public lands are already under formal protection (although this is true for only 1 percent of the world’s marine areas). To determine whether the 12 percent target is adequate, researchers at CI examined how many of the world’s most rare terrestrial vertebrates remain unprotected by the existing network of protected areas (Rodrigues *et al.* 2004). The study concluded that 233 kinds of birds (including about a fifth of

all vulnerable species), as well as 140 mammals, and 346 amphibians have no protection at all. At least another 943 species from these three taxonomic groups are under some but inadequate protection. Similar analyses have yet to be conducted for marine areas, but the number of unprotected species here is likely to be even greater. In short, the current global target for protected areas has failed to provide protection for a very significant number of species. Efforts to expand total public area protected beyond the 12 percent norm would therefore seem to be more than warranted.

In many publicly owned resource settings, however, there are numerous obstacles to establishing new protected areas, including a lack of local political support, funding constraints, and contrary economic development agendas. In recent years, a common response to this challenge has been the sustainable resource management paradigm, but as noted earlier, this approach faces shortcomings of its own. Conservation incentive agreements, in contrast, can potentially be applied to many of the public resource settings where parks are not currently viable, while sidestepping the obstacles that hinder effective sustainable resource management. Conservation incentive agreements can use the same legal mechanisms developed for extractive uses of public lands, such as timber concessions, and can be designed to offer benefits (*e.g.*, relieve the management burden of large areas of public lands, generate tax revenue and employment) comparable to natural resource exploitation. For example, as noted, CI has taken out a timber concession in Guyana that it is managing as a conservation area. Guyana has no protected areas system but owns expansive tracts of pristine tropical forest zoned for logging. In this context, incentive agreements helped to defuse political debates that had for years pitted conservation goals against destructive but revenue-generating resource exploitation.

Box 1: Land Use Zoning in Peru

Peru's Ministry of Agriculture is responsible for managing 72 million hectares of forest, of which 18 million hectares are within the national protected areas system and 54 million hectares are zoned for extractive uses. As is true in many countries, oversight of this expansive area is limited by the nation's severe budgetary constraints. Restricted government presence, along with illegal logging and settlement, results in losses of 260 thousand hectares of natural forest per year. Expansion of the protected areas system, while not impossible, is hindered by public sentiment that additional lands should not be removed from economic use.

To address this situation, changes were made to Peru's Forest and Wildlife Law in 2001 that opened the way for private entities to manage public lands for conservation. The mechanism is called a "conservation concession" and it is similar to CI's implementation of this approach in Guyana in that it involves a long-term (in this case 40-year) renewable lease on public land, but differs from concessions in Guyana in that the Peruvian law requires no annual payments to the government. Instead, the law is more focused on identifying priority areas for conservation and private sector applicants that are technically and financially capable of implementing long-term conservation management. An important objective of changing the law, then, was to facilitate investment in conservation management and thereby reduce the extent of forests that fall under neither public nor private oversight. This in turn responds to growing concern that Peru's mega-diverse forest ecosystems are being lost at an unacceptable rate.

Private Lands

In many places private lands either occupy or border priority sites for biodiversity conservation, including buffer zones for parks or critical corridors between conservation areas. Conservation incentive agreements are equally applicable here. In this context, landowners may make an agreement to protect the natural resources they own in exchange for incentives, formalized with a

contract and perhaps additional protections such as easements or other government registrations of conservation status.

Private lands typically are dedicated to commercial use. For this reason, some form of financial incentive will typically be required to compel private landowners to submit their land to conservation management. Even when land is idle, a financial incentive often will be needed to persuade private landowners to relinquish the option of putting that land under extractive use at some point in the future. In industrialized countries, formal mechanisms have been developed to make conservation financially attractive to private landowners, such as tax benefits and conservation easements.

A conservation easement is a contractual agreement that places permanent, legally binding restrictions on private land use (Byers & Ponte 2005). The landowner maintains ownership of the property, but cedes the right to develop that property. In return for giving up development rights, the landowner receives compensation, in the form of tax credits or other benefits provided by government, or financial transfers offered by third parties such as conservation NGOs. The amount of compensation is based on the reduction in land value resulting from the land use restrictions. Since an easement does not involve a complete transfer of ownership, it amounts to the procurement of 'partial interest' in a property that should be less expensive than outright purchase. In addition to the reduced acquisition costs relative to full purchase, easements enjoy the advantage that they do not require major changes in legislation, as they rely on the freedom of landowners to enter contracts regarding the disposition of private property. Thus, the main requirement for an easement is that a legal vehicle exists for the transfer of development rights, such that all parties to the agreement feel sufficiently secure that the courts will enforce the easement over the long term.

Although easements have proliferated in the United States and are gaining popularity in other industrialized nations, this last requirement suggests why they have yet to be widely implemented in developing countries that present challenging contexts with respect to land tenure as well as legal systems. Indeed, in developing countries such legal, institutional, and financial mechanisms are nearly universally absent. Conservation incentive agreements can fill this gap by mimicking the incentive structure reflected in easements, thus adapting a standard tool in industrialized countries to the developing country context.

Where private lands are not readily available for inclusion in new protected areas, or in the case of voluntary conservation where some financial or technical assistance is required, conservation incentive agreements can be an ideal approach. For example, CI is examining the possibility of entering into incentive agreements with private ranchers whose lands surround a government-protected area in Venezuela's Llanos, the third largest wetlands complex in South America. Given the predominance of private ownership in surrounding areas, this appears to be the only practical approach to ensure the ecological integrity of the protected area, and the wetland ecosystem as a whole.

Indigenous Lands

Indigenous and other communal lands are a third category of land tenure where conservation incentive agreements can be useful. The potential conservation importance of communal and indigenous lands varies, but in some cases they represent a very substantial portion of key biodiversity areas. In Brazil, indigenous lands represent some of the largest landholdings in the Amazon. Similarly, in Papua New Guinea and other areas of the western Pacific, indigenous communities own the majority of the landscape.

In indigenous tenure contexts, conservation incentive agreements can be a particularly effective tool. Some of the most interesting and exciting initiatives with conservation incentive agreements are being developed with indigenous communities. One of the most compelling opportunities is using incentive agreements to help indigenous communities protect their lands from outside pressures of land settlement, logging, poaching, and other threats. For example, CI is currently looking at opportunities to assist a community in Papua New Guinea that established a conservation area to protect sea turtle rookeries, but needs a secure source of long-term funding for effective management. In Ecuador, CI is negotiating an agreement with the Cofán indigenous community to help them manage both their lands and a contiguous national park. In Peru, conservation incentive agreements are being used to help indigenous communities restore *Polylepis* forests in the Andean highlands. In Mexico, the Lacandon indigenous community will use an incentive agreement to fund management of a communal reserve that acts as a corridor between two national parks.

Marine Contexts

The preceding discussion has emphasized the applicability of incentive agreements to terrestrial settings in various tenure contexts. Marine settings, with a similar diversity of ownership regimes, are also proving to offer promising conservation opportunities through the use of this tool (Niesten *et al.* 2005). As with terrestrial conservation, a common challenge facing the establishment of marine protected areas (MPAs) throughout the world is the difficulty of competing against fisheries and other marine resource sectors that offer tangible economic benefits such as employment and revenues to governments and local stakeholders. Although MPAs offer medium and long-term benefits through managed resource use and marine tourism, short-term gains from commercial interests can overshadow this long-term view. Conservation incentive agreements can overcome this obstacle by providing continuous, long-term financial or material incentives to conserve marine resources rather than exploit them for short-term gain. The tool appears particularly useful in situations where local communities are the legal resource owners — as is true, for example, in many marine settings in the South Pacific. CI is pursuing incentive agreements with local communities at several sites in the Solomon Islands, to conserve resources such as coral reefs and turtle nesting beaches. Similarly, the Tobian people of Hatohobei State in Palau approached CI with a proposal to enter into an incentive agreement to protect Helen Reef, which has some of the highest known hard coral diversity among Pacific atolls, through the establishment of an MPA in return for assistance with long-term financing.

Conclusion

As suggested in the preceding sections, the contexts in which conservation incentive agreements can be implemented — on public, private, and indigenous lands as well as marine settings — both complement and potentially greatly exceed the areas where other approaches can be used. The next chapter discusses criteria for assessing the viability of an incentive agreement in a given context.

CHAPTER 2: SITE SELECTION CRITERIA

In recent years, Conservation International's Conservation Economics and Conservation Stewards Programs have initiated pilot projects using the conservation incentive agreement approach in a wide variety of settings. In 1999, the program saw an untapped opportunity for economic incentive-based conservation agreements, but one that required a technical approach not yet developed within the organization. Building on experiences from a variety of field projects, the programs developed a system for identifying sites where incentive agreements are likely to work best. This system relies on feasibility assessments focusing on the specific sets of issues discussed in the following sections, with additional detail provided in the Annex.

Elements of Site Selection

Site selection for conservation incentive agreements involves a series of analyses that require knowledge of both the proposed site as well as its regional or national context. In broad terms, it includes the following elements to ascertain the relative cost-effectiveness and potential for success of an agreement:

- *Ecological justification:* Site selection should consider ecological priorities for conservation, such as CI's *Key Biodiversity Areas* (see <http://www.iucn.org/dbtw-wpd/edocs/PAG-015.pdf>), condition of habitat, and size of the proposed conservation area and/or its connectivity to other protected areas.
- *Stakeholder assessment:* All potential project sites require a clear identification of key stakeholders, including parties to a prospective conservation incentive agreement and others who can impact or be impacted by an agreement. One needs to determine if parties to an agreement will be reliable, and if stakeholder issues can be managed responsibly and effectively given on-the-ground capacity and resources. A key component of the stakeholder assessment considers property rights and governance issues, which greatly influence the feasibility of a conservation incentive agreement in a given context.
- *Economic evaluation:* A principle criterion for selecting a site is *value*. How do the costs of a possible incentive agreement compare with other sites of similar ecological importance, and are there donors willing to cover these costs? An economic evaluation determines if a site is an affordable addition to a conservation incentive agreement portfolio, taking into consideration also the costs of alternative approaches.
- *Legal analysis:* Conservation incentive agreements can be constructed using a variety of legal tools, ranging from private contracts to public leases. An assessment of available legal mechanisms should reveal the types that are most appropriate for a given context.

The application of site selection analyses can vary greatly from one situation to the next. CI has examined sites as different as community forests, public fisheries, commercial forest concessions, and private landholdings, in locations as varied as the high Andes, coral reefs in Melanesia, and African rain forests. The following sections summarize accumulated experience from performing site selection analyses in these sundry contexts.

Ecological Justification

An ecological justification for conserving a site provides information on why an ecosystem is important for conservation (*e.g.*, species diversity, endemism, representation) and a description of the area's characteristics (*e.g.*, site condition, size, connectivity to other protected areas, threats to its conservation). Most conservation groups have identified regions where conservation is a priority (*e.g.*, CI's Key Biodiversity Areas, Hot Spots, and Wilderness Areas), based on the presence of important ecosystems for conservation, quality of habitat, and level of threat. These prioritization schemes generally allow one to justify the importance of working within a particular region. Further work may be necessary to justify a specific site's importance based on its local characteristics.

Having located a site within a region prioritized for conservation, one should assess whether the actual habitat is of sufficient size and condition to merit attention. This typically requires the assistance of an ecologist familiar with the region who can identify whether the site has been degraded (and its potential for restoration), whether it is representative of the ecosystems in the region prioritized for conservation, and if target species have ample habitat to prosper in the proposed conservation area.

It is beyond the scope of this document to delve more deeply into the technical aspects of ecological assessment and conservation biology. And indeed, we assume that for most practitioners responsible for establishing conservation incentive agreements, site selection already will have been done by a scientific team that preceded them. What is most important is that the practitioner be strategic about maximizing the value of sites selected for a conservation agreement in terms of present and future connectivity with other protected areas, or establishing areas of sufficient size to maintain habitat for viable populations of the species that inhabit it.

The site selection process for an incentive agreement necessarily includes a wide range of factors that go beyond a site's biological characteristics. Together, these factors inform a comprehensive assessment of the relative cost-effectiveness and potential for success offered by different candidate sites.

Stakeholder Assessment

Project viability depends critically on the positions of a potentially wide range of stakeholders. To begin, it is important to know what a stakeholder is. For our purposes, a stakeholder is any group or person who is directly affected, either positively or negatively, by the conservation agreement; or, any group or person who can affect the outcome of the agreement - either by contributing to or hindering its success. That might include any number of actors who do not appear immediately obvious. By way of example, typical conservation agreement stakeholders may include any of the following actors:

- Community and/or indigenous groups living in or near the site;
- People owning land or assets in or adjacent to the site;
- Government agencies responsible for protected areas, natural resources (*e.g.*, forestry, mining, energy), or public services;
- Local or international non-governmental organizations working in community development, conservation, human rights, indigenous rights, *etc.*;
- Multi and bi-lateral donors with projects in the area;
- Natural resource companies (*e.g.*, logging, mining, oil companies);

- Business groups representing the interests of the private sector; and,
- Religious organizations.

Once stakeholders are identified, they can be grouped into those that will be directly involved in the conservation agreement, and those that either can impact or be impacted by the agreement. Those who will be involved in the agreement include the resource owner, and in some cases users of the resource who are not owners (*e.g.*, fishermen in open-access fisheries). Questions surrounding property rights will often arise in this component of the assessment: who owns the resource or habitat area? Who makes use of the resource, regardless of formal ownership? Are informal, or customary, use and ownership rights involved? In many instances where property rights are unclear or insecure, agreement design will have to pay particular attention to the balance between incentives and investment in enforcement capacity.

For stakeholders who will be involved in the agreement, an essential characteristic to assess is whether they can be a reliable party to an agreement. If the stakeholder is a community, government, or other organization, the quality of their representation, their internal decision-making processes, and stability will be important factors. Questions to ask in this regard might include: has a system of representation and decision-making been in place for a number of years, or is it fairly recent? Does decision making appear orderly or sporadic and inconsistent? Does leadership change often due to fundamental issues that cannot be resolved within the stakeholder group? One example of this might be a rural community of colonists composed of various ethnic or religious groups that recently settled in the same area. Another could be a government that appears unstable or unable to maintain consistent legislation that would affect a conservation agreement. If the prospective parties are individuals, their reputation from other dealings may offer clues about their reliability. In all cases, if prospective parties to an agreement do not appear reliable with respect to governance considerations, it is an indication that a successful, long-term conservation agreement may be difficult to achieve. If conservation at a site is extremely important and local stakeholders are *not* sufficiently organized to establish an agreement, a decision may be made to assist in building local capacity.¹

For stakeholders who will not directly be involved in an agreement, but will be impacted by it, an assessment of whether the impacts can be managed responsibly is necessary. For example, a CI conservation agreement in Guyana involves conserving forest land that might otherwise be logged by commercial interests, and the establishment of a conservation area could negatively impact local communities by constraining employment opportunities in logging. The response of CI was first to consult the communities, and based on their feedback to establish a voluntary community development fund and to train and employ individuals from the communities as rangers in the conservation area.

For those stakeholders that can impact the agreement, specific strategies must be in place to ensure that their issues are understood and managed. In some cases, this will include various agencies/ministries within a government. For this reason, it will be essential to understand how relevant levels of that government operate and which agencies/ministries must be engaged. Stakeholders that can impact an agreement may also include NGOs, activist organizations, trade groups, or others with social, economic, or environmental issues in the area. They too will need to be understood and engaged as necessary.

¹ In this regard, we have observed that, in many areas that are priorities for conservation, a great deal of capacity building has already been undertaken with communities as part of integrated conservation and development projects (ICDPs). Accordingly, in some cases such sites may represent good candidates for consideration in selecting sites for conservation incentive agreements.

Box 2: La Cojolita, Mexico

La Cojolita is a 24,000 hectare communal reserve in the state of Chiapas, Mexico that provides a critical link between two established protected areas, Montes Azules Biosphere Reserve in Mexico and Sierra del Lacandon National Park in Guatemala. The area is owned by three indigenous groups (Choles, Tzeltales, and Lacandonas), which together comprise the Lacandon Community. Until recently, this community had agreed to preserve its communal reserve, but population growth has increased pressure to use the area for economic purposes including logging. The Government of Mexico holds authority for permitting exploitation of timber in the forest reserve, and it is responsible for conservation of neighboring land in the biosphere reserve.

The stakeholder process in this context is complex. It involves three culturally distinct indigenous groups, as well as the government, all of which share authority over the fate the forest reserve. Nevertheless, decision making in the community is conducted by council, including representation from elders of each indigenous group, and historically its decisions have been respected.

Each stakeholder holds a different vision for the reserve.

- Two indigenous groups see conservation as integral to their traditional way of life, and are seeking a way to ensure it can happen, despite economic pressure from within the communities. Their vision is to protect the area formally, and receive funding assistance for management which in turn will create local employment.
- One indigenous group sees logging as the best way forward. They have applied to the government for permits to exploit the forest reserve.
- The government shares a concern for conservation, especially given the strategic location of the reserve, and has to the present not permitted logging.

A balance of the three visions for the reserve could result in both conservation and economic benefits. CI is using a stakeholder engagement process to develop a conservation agreement that provides both jobs and economic investments for the community, and a means to involve professional managers but not at the exclusion of the community. The process, however, takes time and patience – this one has already taken two years and running, and builds upon many years of prior engagement, trust-building, and practical understanding between CI and the community on other projects. Given the potential conservation gains, and the knowledge that this community is stable and an agreement can be backed by the government, the investment appears very attractive.

Economic Evaluation

A principle criterion for selecting a site is *value*. How do the costs of a potential incentive agreement compare with other sites of similar ecological importance, and to other possible conservation approaches? Are there donors willing to cover these costs? An economic evaluation determines if a site is an affordable addition to a conservation portfolio.

Understanding Context

An economic evaluation begins with an assessment of the alternatives available to resource owners or users. Some resource owners may be predisposed to conserving the resources but lack the financial ability to do so. Their perception of alternatives may focus on varying levels of conservation management or may include some limited resource use. Others may view the resource in purely economic terms, and weigh their alternatives in terms of potential returns from exploiting it – this relates to the direct use values described earlier in the discussion of Total Economic Value. Although global demand for conservation derives from several components of

Total Economic Value, the financial value to resource owners is rarely associated with anything other than direct use. Accordingly, compensation packages provided under conservation incentive agreements only need to offset relevant components of the direct use value.

An incentive to conserve the resource will need to be attractive in the context of the resource owners' or users' perceived alternatives, or opportunity cost. The opportunity cost of conservation refers to the benefits foregone by conserving a resource rather than putting it to its next best use. For example, if the next best use is timber extraction, the opportunity cost of conservation is the income foregone by not logging an area. A distinction between real and perceived opportunity cost may be relevant here – even if the known opportunity cost of conserving an area is low (for instance, if we know that potential income from timber extraction is negligible due to high transportation costs), the resource owners may believe the value to be high and demand generous compensation. Alternatively, resource owners may be unaware of the high opportunity cost, creating an opportunity to get a 'good deal' but raising the risk that the true opportunity cost reveals itself at a later date and that the agreement then requires expensive renegotiation or falls apart. In short, the feasibility assessment must explicitly address the question of resource owners' perceptions of opportunity cost, and consider the impact of those perceptions on the potential for reaching an affordable, equitable, and durable agreement.

Fundamentally, the conservation incentive agreement approach acknowledges that conservation may impose two kinds of costs on resource owners: an opportunity cost (which can range from zero in extremely remote areas devoid of economically viable resources, to extremely high such as in the case of areas with high-value mining potential), and the cost of conservation management. For an agreement to be attractive to resource owners, the incentives offered usually will have to be greater than the sum of opportunity and management costs.

In some cases an appropriate incentive will be limited to financial assistance for conservation management, helping resource owners to achieve their conservation goals. An example of this is the *conservation concession* mechanism in Peru (see Box 1), where the government looks to the private sector to assist in conservation management of public forests. In other cases, resource owners may depend on the financial returns from exploiting the resource and will perceive economic losses from conservation. An example is a community in Guatemala (see Box 3) that depends on logging revenue and proposed replacing it with conservation incentives that would provide funding for jobs in conservation management, for improving the community's healthcare and education services, and for generating a small cash dividend for community members.

Assessing Potential Incentives

A number of considerations should go into identifying appropriate incentives, and in all cases that process should be built upon stakeholder consultation. An assessment of investment opportunities, their costs and practical implications, and potential partner organizations that can assist in their implementation will be instrumental in constructing a viable and effective compensation package.

In most cases an incentive agreement will include funding or technical assistance that is directed towards conservation management. Any conservation agreement should ensure that there is adequate funding for proper monitoring and enforcement of the site. Many communities appreciate the income, training, and responsibility that can come from local employment in these activities.

Estimating the costs of management is highly dependent on site-specific factors such as local threats to the site. In contrast to parks, conservation incentive agreements directly benefit the owners and users of the site, so the local pressure to exploit resources is mitigated. However, there may be external threats such as poaching, errant grazing, or fire that also need to be monitored and managed. The presence of enforcement personnel and demarcation of conservation areas go a long way towards ensuring successful management. An estimate of these needs, as a function of external threats, is probably a fair basis for developing management costs. However, the addition of other monitoring expenses, *e.g.*, remote sensing and population sampling, can increase a management budget by multiples. The level of desired scientific monitoring will therefore be an important factor in assessing the overall cost of management.

When incentives include social and economic investments, it will be important to assess which investments are actually possible given technical capacity, available infrastructure, and funding. It is also important to consider the kind of impact that different investments will have in terms of building a stronger and more sustainable agreement. Direct cash payments, for example, may be simplest and most appropriate where resource owners are completely integrated into local cash economies, whereas social service investments may be more appropriate in contexts involving non-cash economies and where social services are lacking. Common social and economic investment options include education, health, and enterprise development. The range of possible social and economic incentives is quite broad given the variety of potential contexts, making partnerships with organizations that specialize in social and economic projects an important and attractive option in many projects.

Box 3: Maya Biosphere Reserve Community Forests

Guatemala's 2.1 million hectare Maya Biosphere Reserve, located in the lowland Department of Peten, is part of CI's MesoAmerican Hotspot and is one of the most significant forest areas in Central America. It is also the location of the most important Maya archaeological sites, including the largest Maya structure at El Mirador and the world famous ruins of Tikal. Outside of the core protected areas, the biosphere reserve is allocated to local communities for forest management. Two such community-managed areas, comprising 80,000 hectares of tropical forest, are Carmelita and Selva Maya del Norte.

The members of the Carmelita Cooperative and the Selva Maya del Norte Association proposed to CI an incentive agreement premised on the "purchase" of timber resources destined for commercial exploitation. The purchased timber would be left standing in a natural state and managed for conservation for the remainder of the communities' tenure of the forest area. Both communities hold 25-year forest concession contracts with the Guatemalan government that confer the right to extract resources, including timber, under approved management plans.

Key terms of the proposed conservation agreement include:

- The Selva Maya del Norte Association proposed selling 100% of its permitted and marketable timber volume to CI. Pending results of a pilot phase, their intent was to continue selling 100% of the permitted timber volume throughout the life of their forest concession.
- The Carmelita Cooperative proposed selling 35% of its permitted and marketable timber volume. Pending results from a pilot phase, the community would consider increasing the portion of timber volume sold to CI. The community would continue to harvest and process any timber not purchased under the conservation agreement, in limited production areas outside of those conserved.
- Both communities proposed investing the annual incentives made by CI in the following areas:
 - Employment in management and protection of the forest areas;
 - Payments to CONAP (The National Protected Areas Council), including area fees and taxes on the timber volume purchased under the conservation agreement; and

- Community development investments in education, health, and low-impact economic activities.

The proposed level of incentives in the agreement reflected the two ways in which communities benefit from logging: profit and local employment. They calculated this benefit by multiplying the commercial volume available for harvest each year by the market price for timber, subtracting the production costs typically paid to *outsiders* to commercialize the wood. What remains is the revenue that is allocated to paying for local employment, and profits that are distributed within the community via a cooperative.

The two formulas for calculating this were:

- Community Benefit from Logging = Community Profit + Local Employment
- Community Benefit from Logging = (Vol * Price) - Production Costs Paid to Outside Firms

It was proposed that in the pilot phase CI negotiate annual incentives for each year based on open-market prices for timber. After that phase, the communities would seek to establish a model to stabilize incentives over the long-term.

Although the costs of management and protection were to be covered by the annual conservation incentive payment, there could be years in which the value of timber available to sell to CI was less than the cost of adequate conservation management. Therefore, it was proposed that CI guarantee a payment floor, defined as the sum of management costs and necessary tax payments to government, to ensure adequate income to implement protection and enforcement activities in each forest concession.

The table below presents a sample calculation for annual incentives under the proposed conservation agreement. Harvest of each forest area is regulated by a management plan (a legal requirement in the Maya Biosphere Reserve) that divides the forest into annual cutting areas. Under the management plan, areas can not be re-harvested for 40 years after each harvest. Therefore the incentive offsets the opportunity cost of not harvesting a percentage of one cutting area per year in Selva Maya and Carmelita.

Annual Conservation Incentives		
<i>Category</i>	<i>Selva Maya del Norte</i>	<i>Carmelita</i>
Annual Harvest Volume		
Primary Species	51,892 board ft	94,874 board ft
Secondary Species	35,623 board ft	100,214 board ft
Annual Harvest Value		
Primary Species	\$ 68,561	\$ 145,887
Secondary Species	\$ 5,344	\$ 15,032
Gross Harvest Value	\$ 73,905	\$ 160,919
Production Costs Paid to Firms Outside of the Community	\$ (20,957)	\$ (38,315)
Required Incentive	\$ 52,948	\$ 122,604

The Selva Maya and Carmelita communities found this incentive package acceptable; negotiations over terms and amounts concluded, and both parties were ready to enter into an agreement. The communities even rejected a higher offer from a private sector operator interested in commercial logging. However, ultimately it was not possible to proceed with these agreements due to objections and political obstacles raised by other stakeholders. These stakeholders were development organizations operating in the region and their allies in government, who were committed to the conventional sustainable forest management approach. Thus, in the end, local politics and a clash of paradigms stymied this incentive agreement initiative, illustrating how thorough stakeholder analysis and intensive management of relationships with all stakeholders sometimes may not be enough. In this case, the institutions in question raised no objections until the process was nearly complete and they realized that the incentive agreement was about to become a reality.

Donors and Funding

A crucial part of the economic evaluation examines project affordability, which involves assessing donor interest and allowable funding mechanisms. Donors might be aid agencies, bi- and multi-lateral development banks, foundations, individual philanthropists, and corporations. Their interest in a site will depend on a number of factors, and each donor will have specific restrictions on the use of their funds.

Aid agencies and development banks (*e.g.*, USAID, World Bank, and Inter-American Development Bank) can be good partners and donors for conservation incentive agreements. Their mandate for projects in a given country will vary, and generally will be guided by priorities established in consultation with the host-country government. As a result, a coordinated project with one of these institutions will also involve engagement with government, and may be restricted in geography and themes (*e.g.*, health, education, agriculture) that are priorities for that government. A common restriction with aid and development funding is a short time horizon for project implementation. A typical funding cycle may be four to five years, meaning the project must be initiated and completed within that period, and adapting this type of finite funding into an ongoing incentive agreement may require creativity. However, many development-oriented institutions value conservation outcomes and long-term impacts but are not well positioned to secure either on their own, and therefore may welcome joint implementation of conservation incentive agreements.

Private philanthropists and foundations present a great variation of interests and restrictions for their funding. The range begins with donors that support concrete, short-term projects to those willing to fund process-oriented initiatives lasting for many years. Geography also plays an important role, with most foundations today selecting specific regions to focus their funding. CI's Global Conservation Fund, supported by the Gordon and Betty Moore Foundation, is an example of a funding source that supports protected area creation and management. Its geographic focus relates to CI's key biodiversity areas and it is unusual in its commitment to covering the recurrent costs of protected area management – making it well suited for incentive agreements.

Corporations are broadly involved in conservation initiatives. A quick survey of multi-national corporate partnerships with conservation groups reveals an impressive host of voluntary initiatives by Bristol-Meyers Squibb, 3M, BP Amoco, Budweiser, ConocoPhillips, ChevronTexaco, Disney, ExxonMobil, Intel, McDonald's, Ford Motor Company, Mitsubishi, Newmont Mining, Rio Tinto, Shell, Starbucks, Wal-Mart and many others. Their interests range from public relations to community engagement and biodiversity impact mitigation. Corporations will typically focus their philanthropy in regions where they operate, and increasingly seek to integrate voluntary conservation initiatives within a Corporate Social Responsibility (CSR) strategy. One example is a CI partnership with Compañía Minera Antamina, a Peruvian mining company operating near Huascarán National Park. The company is building conservation incentive agreements into a thirty-year strategy for improving the welfare of local stakeholders potentially impacted by their copper and zinc mining operation.

An important issue is securing an ongoing source of funding for conservation incentives. As mentioned, aid and development institutions tend to make commitments with short timeframes, foundations may vary from one to many years, and corporations follow in this regard. One solution is to continuously raise funding, but another more robust solution is to create a trust fund with enough money to endow the funding needs of the incentive agreement. As a rule of thumb,

an endowment should be twenty times the size of the annual funding need, which may present a fundraising challenge.

In summary, the economic evaluation of a potential site considers the affordability of a conservation incentive agreement, in terms of the incentives required and project financing prospects. However, such analysis can only provide an initial indication, as ultimately negotiation will determine the incentives needed to reach an agreement. An assessment of the resource owners' and users' alternatives will greatly inform one's negotiating position, and help to determine whether an agreement is likely to be affordable in the first place. Factors that will affect the negotiation may reach beyond a financial analysis and include the ability of a conservation group to coordinate other players to assist in developing an incentive package that meets stakeholder objectives. Finally, practitioners must recognize that in some situations, the opportunity cost of conservation may simply be too high, or funding prospects too weak, to make a conservation incentive agreement affordable. In these instances, other strategies will be required. Nevertheless, regardless of the strategy selected, an understanding of the opportunity costs and incentives driving biodiversity loss will benefit the design of appropriate interventions.

Legal Analysis

The basis of a conservation incentive agreement is an ongoing economic incentive to protect biodiversity. Like most long-term agreements, it is wise to formalize it with a legal document. Conservation incentive agreements can be constructed using a variety of legal tools, ranging from private contracts to public leases. An assessment of the available legal mechanisms should indicate what types of legal agreements are useful *and* enforceable. Typically, a lawyer in the country where the project is implemented will assist the development of a legal agreement. Nevertheless, one should be aware of the available tools and their strengths and weaknesses.

Flexibility and creativity will most likely be necessary, as legal mechanisms intended for a different purpose may need to be adapted for conservation objectives. For example, in Peru there is specific legislation that allows private entities to lease public lands for conservation (conservation concessions), while on public lands in Guyana one must use the same legal arrangements as a company looking to exploit timber. On private lands, a standard contract might be used but there may also be potential to integrate additional government protections under local law.

Conservation incentive agreements derive their "permanence" from an ongoing *quid-pro-quo* – incentives in exchange for conservation. Theoretically, an incentive agreement can end amicably if the parties decide it is no longer in their interest to conserve the resources. This is distinctly different from conventional legal protection of biodiversity, such as zoning an area as a park, which is for all intents and purposes a permanent legal designation. While some believe this is a weakness of conservation incentive agreements, it may also be its greatest strength as it opens the door to conservation in places where resource owners would not initially consider permanent legal protection. It also provides conservationists more flexibility in adjusting their portfolio of conservation areas as science develops a better understanding of the most important geographic locations to allocate funding. The challenge of permanence is simply constructing an incentive agreement that will be appealing to the resource owner *and* the conservationist over time. Legal mechanisms allow the parties to formalize that incentive agreement.

Legal Mechanisms

The most straightforward means to formalize a conservation incentive agreement is to use a standard contract or lease. The primary advantages of these instruments are that they can be readily tailored to the specific needs of the conservation incentive agreement, and are relatively inexpensive and straightforward to implement. In the event that terms are breached, the judicial system is available to settle the issue. Naturally, a contract or lease is only as good as the practical legal means to enforce it, and it is often the case that judicial systems are weak in many parts of the world. However, an important strength of conservation incentive agreements in weak legal contexts is that, by design, compliance is motivated by the benefits provided under the agreement rather than the threat of legal retribution. Thus, as with any agreement, it is crucial to select well the parties with whom the agreement is made, and ensure that the incentives offered will have a lasting appeal to secure lasting compliance.

On public lands the principle mechanism for conservation incentive agreements is the *concession* or natural resource lease. The largest land areas in the world are owned by governments and they often seek to put them under private management, principally for natural resource exploitation such as logging and mining. In many areas it is possible to use these same legal agreements to acquire resources for purposes of conservation. The basic idea is to pay governments a competitive fee as if entering an agreement to exploit commercial resources, usually in the form of a tax on either area or volume of resources, and to manage the area for conservation. In some countries it may be illegal to do this, requiring concessionaires to use (*i.e.*, exploit) the resources or lose their rights to them. In other countries, forestry regulations explicitly accommodate the intention to conserve, as in the cases of Peru's Forest and Wildlife Law and the Democratic Republic of Congo's Forest Code of 2002. Moreover, in most cases a substantial degree of permanence can be achieved through long lease periods and renewal clauses. Concessions vary in length, but are often decades long with automatic renewal if the terms of the agreement are met to the satisfaction of the parties.

Box 4: Los Amigos, Peru

Rio Los Amigos runs a course through a 146,000 hectare watershed in Madre de Dios, Peru, now protected as a "conservation concession." It was the first protected area of its kind in Peru, established using a new legal mechanism included in the 2000 revision of the country's Forest and Wildlife Law for private conservation management of public forest lands.

Peru's forest estate is more than 70 million hectares, but only a small fraction of this area is under production or management of any kind. Given the vastness of the area and a relatively tiny public-sector budget to manage it, the new legislation aims to attract the private sector to manage parcels of the forest estate for conservation. The conservation concession mechanism permits conservation groups, private individuals, or even entrepreneurs interested in eco-tourism and non-extractive uses of the forest to present management proposals to the government. Provided the entity has a viable plan, is technically competent, and commits a reasonable budget (no minimum requirements are established in the regulations; this decision is at the discretion of INRENA, Peru's environmental agency), a conservation concession will be issued to the applicant for 40 years, on a renewable lease that is re-extended for 40 years upon successful five-year performance reviews.

The Los Amigos Conservation Concession is operated by Peruvian NGO Amazon Conservation Association, which has installed a scientific research station that attracts biologists from around the world, including bodies like the Smithsonian Institution and Field Museum of Chicago. The station and the management of the area represent a US\$250 thousand dollar per year local expenditure that generates a number of local jobs at various skill levels, ranging from unskilled manual labor to post-graduate biologists. Los Amigos also forms part of an ecological corridor between Manu National Park in Peru and

Bahuaia-Sonene National Park in Bolivia. Since the creation of Los Amigos, tens of applications for conservation concessions have been submitted to INRENA by private parties interested in managing areas for conservation.

A major advantage of concessions is that they open the possibility of conservation across vast areas of public lands that might otherwise never be considered for protection. They can also be faster to implement and more flexible than conventional protected areas, which may take years, if not decades, to create in many countries. However, the option of re-zoning public lands or marine areas as formal protected areas should not be overlooked in the context of a conservation incentive agreement. Conservation incentive agreements may actually be the first step towards permanent legal protection. When it is possible to negotiate for permanent legal protection, it may be prudent to seize the opportunity.

On private lands, legal mechanisms in addition to standard contracts that can be used in the context of a conservation incentive agreement include easements and government registrations of conservation status. In these cases, the private resource owner agrees to conserve the resource in exchange for an incentive, and buttresses that agreement by creating an additional legal protection for the resource. As described previously, conservation easements allow a landowner to make a legal declaration to give up “development rights” to property without losing ownership of it. This has the advantage of allowing the landowner to continue using the property, as long as they do not exploit the resources protected by the easement. A third party, like a conservation group or land trust, will accept the responsibility of monitoring the easement and can rely on the judicial system to enforce it. Easements have the additional advantage that they attach to the property, so change of ownership does not affect the conservation status. Easements are well developed in the U.S., where the government offers a financial incentive in the form of a tax break, and are beginning to grow in popularity in some countries in Latin America. However, the often weak tax collection systems in many developing countries will limit the usefulness of this approach.

A related mechanism common in Latin America is the *bosque protector*, a voluntary registration with the government of conservation status for private lands for a finite period of time. Declaring the conservation status of an area entitles the landowner to government support in enforcement, especially in the case of external incursions. Variations of this mechanism exist in many countries. In Mexico, a “certification” of conservation status is possible. In Papua New Guinea, communities can designate their territory as either Wildlife Management Areas or Conservation Areas, which are publicly registered and enforced conservation areas on lands under traditional customary ownership. The Forest Code in the Democratic Republic of Congo specifically provides for conservation concessions, under which concessionaires receive rights to manage an area in return for providing compensation to government and local communities.

In some countries, resource owners can transfer property ownership to a foundation incorporated for the purpose of conservation, with specified guidelines for conserving the property in its articles of incorporation. The foundation directors may include the resource owners, as well as others involved in the conservation agreement. The original resource owners may continue using the resources within agreed upon limits. The articles of the foundation may also prohibit the sale of the resources. This approach has the added advantage of scalability, for example allowing multiple landowners in a particular area to participate in a single foundation, as well as communal landowners. Motivations to participate in such schemes might include a desire to protect the conservation status of an area from government action, to achieve the minimum area needed for

ecological purposes or for nature-based enterprises, tax advantages, or conservation incentives offered by third parties.

Again, legal mechanisms are a means to formalize conservation incentive agreements; they are not an end in themselves. Unless the parties are selected well and the incentives designed properly, the legal mechanism alone will not likely ensure conservation. Public or private legal mechanisms are varied, and some creativity is generally required to identify an appropriate mechanism for a given application.

Conclusion

If a site presents a suitable candidate for a conservation incentive agreement on the basis of ecological, stakeholder, economic, and legal criteria, the project can move into an implementation phase. As described in the Annex, implementation will involve a broad range of activities, including continued stakeholder engagement to secure understanding and buy-in for the initiative, further economic analysis to refine the incentive package, development of conservation management plans, institutional capacity-building to ensure a viable conservation management presence, establishment of funding vehicles and fundraising, formalization of the legal basis for the incentive agreement, and more. As the portfolio of projects matures, we will no doubt learn further important lessons regarding the many facets of completing a conservation incentive agreement.

CHAPTER 3: REFLECTIONS ON EXPERIENCE TO DATE AND FUTURE DIRECTIONS

As noted in previous sections, CI's first experiment with the conservation incentive agreement approach was the Upper Essequibo Conservation Concession in Guyana. Since then our portfolio of pilot projects has expanded considerably, including pilot efforts in Africa, Asia, the South Pacific, and elsewhere in South America. This portfolio evolved in response to emerging opportunities and expressions of interest from CI's country programs and other partners, but also reflects a deliberate effort to experiment with the approach in a number of different contexts. Our experience to date confirms our initial belief that conservation incentive agreements are an extremely flexible tool that can be adapted to a wide range of different settings, a fact reflected in the broad array of projects in different ecosystems, ownership regimes, partnership arrangements, and legal contexts that are currently under development. This chapter presents examples of current projects, offers some observations on the approach drawn from experience to date, and concludes with comments on what will be needed to promote broader adoption of this approach in the future.

Some examples of conservation incentive agreements

As of the end of 2007, CI is working on conservation incentive agreements in more than a dozen countries. The areas targeted by the projects range in size from 1,000 ha to well over 10 million ha. The predominant ecosystem type represented in this sample is terrestrial rain forest, but the portfolio includes a wide variety of ecosystems from marine turtle nesting beaches and adjacent coral reefs, to mangrove swamps and freshwater wetlands, to high altitude Andean *Polylepis* forest.

The conservation concession in Guyana illustrates an incentive agreement in a terrestrial rainforest setting, where human population density and the economic value of the resource are extremely low but national legislation did not accommodate formal protected area creation. The Solomon Islands provide an example of a marine setting where local stakeholders have already demonstrated an interest in conservation management, but require financial support to implement protection activities on an ongoing basis. Resource users in the Solomon's Arnavon Islands recognized the impact of over-harvesting sea cucumbers and other resources and chose to set aside 8,270 ha of marine area and a 288 ha coastal zone as a legally designated provincial protected area (there exist no protected area provisions in national legislation). Members of three local communities receive training and salaries to patrol the area and participate in monitoring of sea turtle nesting sites, with financial and technical support from The Nature Conservancy (TNC). The onsite costs of the project amount to less than \$25,000 per year, a small sum given that a recent assessment identified this area of the Solomon Islands as the second most biologically diverse tropical marine ecosystem in the world (after only eastern Indonesia's Raja Ampat Islands) and the Arnavon reefs as among the best conserved in the region. In addition, the Arnavon Islands support the largest rookery in the Western Pacific for the critically endangered hawksbill turtle. CI has collaborated with TNC to establish an endowed fund of about US\$500,000 to guarantee long-term financing for this project, which represents the first endowment for a marine protected area in the Pacific. This secure financing ensures that funding for employment and conservation management will continue to flow to local communities. In summary, under the agreement between communities, the protected area management body, the government, and the conservation investors, communities receive financial support from the endowment conditional on adherence to the management plan.

The TNC-CI collaboration in the Arnavons project shows how other organizations are also beginning to embrace the incentive agreement approach. For example, in Sierra Leone the Conservation Society of Sierra Leone (CSSL) and the Royal Society for the Protection of Birds (RSPB) are protecting the Gola Forest – the largest area of Upper Guinean rainforest in Sierra Leone – using a model similar to the conservation concession CI is operating in Guyana. The three Gola Forest Reserves (North, East, and West) total 74,800 ha, and were originally designated by Sierra Leone’s Forestry Division as production forest, available for timber exploitation. The CSSL/RSPB initiative involves securing a timber license, but managing the area for conservation and paying annual royalties that will be used to deliver benefits to local communities and strengthen capacity of the Forestry Division. Notably, the concession application explicitly articulates the intention to secure formal protected area status before the end of the concession period, and to finance the concession and eventual protected area through a dedicated trust fund.

In a project using a somewhat different approach, Birdlife International is exploring the potential to collaborate with a timber concession holder to protect one of the largest remaining blocks of lowland rainforest in central Sumatra, including critical habitat for the Sumatran tiger and Sumatran elephant. The strategy is motivated by the observation that trying to oust the current concessionaire will meet considerable political resistance at the Ministerial level, and that seeking to establish a national park will raise objections from local government and communities. Instead, Birdlife intends to negotiate a deal with the concessionaire to transition the area to conservation management in return for compensation, and during this period cultivate support from local communities and local government for securing permanent protected status after the concession term expires. This approach will thwart the imminent threats posed by continued logging, lack of law enforcement, and potential conversion to agriculture, and buy time for Birdlife to demonstrate the benefits of conservation to local stakeholders.

But not everyone is convinced ...

Although CI and other organizations are confident that direct incentives through explicit conservation agreements with resource users offer a valuable tool in many different settings, a number of concerns have nevertheless been raised about the use of this approach. Below, we discuss the more frequently raised issues.

Too expensive

A conservation incentive agreement typically involves a contractual financial obligation on the part of the conservation organization, which has led some to question whether this approach is affordable over the long term. In fact, in some places, the compensation required to persuade resource owners to manage habitat for conservation will undoubtedly exceed our ability to pay. However, we have found that this is far from universally the case; in many areas this approach is surprisingly affordable, while offering substantial benefits to local resource users (more on costs below). Moreover, even in contexts where a conservation incentive agreement may seem expensive, it is not always clear that other approaches would necessarily be less expensive or that lower expenditures would be sufficient to achieve the desired conservation objectives.

Sets a dangerous precedent

Another concern sometimes raised is that by providing compensation for conservation services, we set a precedent by which it will become impossible to obtain conservation ‘for free’.

However, truly ‘free’ conservation is extremely rare, and will become even rarer as countries reach the limits to the amount of area they are financially or politically able to place under formal protection. Moreover, even when countries create national parks, this is not free – in recent years Gabon and Madagascar provide examples of governments that, at the urging of conservation organizations, took bold steps to place additional areas under protection, but with an explicit expectation that the international community assist with financing of protected area management. The number of parks around the world with no or very poor management clearly illustrates the limitations of ‘free’ conservation. In addition, many priority areas for conservation are home to marginalized human populations who depend on the natural resource base. To expect such communities to provide ‘free’ conservation services hardly seems reasonable, and setting a precedent whereby they reap unambiguous, concrete benefits from conservation efforts can only be seen as a positive.

Ties up conservation funds

As noted, a conservation incentive agreement often involves a long-term financial commitment. We believe that the most practical approach to securing our ability to meet this commitment is through the establishment of dedicated endowments that sustain a flow of benefits. However, some feel endowments lock up scarce conservation funds that could be used to meet pressing needs elsewhere. Although this is of course true, the fact remains that long-term recurrent costs are an unavoidable reality that, if not covered, can quickly lead to costly setbacks in local conservation. Moreover, many years of effort and experience have yet to reveal more effective solutions to the challenges of funding recurrent project costs. Projects involving sustainable resource use, for example, have generally not shown convincing financial or ecological benefits. Similarly, many sites cannot satisfy the prerequisites for financially successful ecotourism, programs based on non-timber forest products have not achieved conservation on a meaningful scale, and the integrated conservation and development project approach is now widely recognized as a disappointment. For long-term financial sustainability, no tool other than dedicated endowments has demonstrated an ability to guarantee a sustained flow of benefits over time.

Enforcement difficulties

Monitoring of compliance and enforcement are key components of the conservation incentive agreement approach. Unless performance is monitored to ensure compliance, the incentives will not work since the benefit stream must be contingent on compliance. A successful agreement also requires adequate investment in enforcement mechanisms, to strengthen all relevant parties’ ability to comply with the agreement. Some observers note that enforcement is notoriously difficult, particularly in settings with weak legal institutions and government capacity, and thus poses a major obstacle to conservation incentive agreements. Clearly, enforcement is a challenge and can require a considerable investment. Two points suggest that it does not, however, undermine incentive agreements as a conservation tool. First, enforcement requirements present a ready target for investments that directly benefit local stakeholders in the form of training and employment. Second, as much of a challenge as enforcement may be, no other conservation tools eliminate the need for monitoring and enforcement. Indeed, given the positive incentives to participate in conservation provided by incentive agreements, there is reason to believe that in many situations enforcement may be easier, less expensive, and less confrontational under an incentive agreement than when using other tools.

Distracts from efforts to create formal protected areas

Some critics worry that incentive agreements will divert attention and resources on the part of conservation interests, and interest on the part of host governments, from protected area creation. In addition, these critics object to conservation incentive agreements on the grounds that they do not yield permanent protection in the same way that, for example, a national park does. First, it should be understood that conservation incentive agreements are a response to situations where the creation of a national park or other protected area is not possible; when possible, the ideal way to conserve habitat is usually the creation of a formal protected area, with clear legal status, an enforcement mandate, and adequate funding. However, not all high priority sites for biodiversity conservation fall in areas with few local inhabitants and no alternative economic uses, in countries that are willing to create additional parks. Therefore, alternatives to formal protected area creation are required. Second, the degree of permanence provided under a conservation incentive agreement depends on the individual situation. In some instances, an incentive agreement can take the form of a renewable 99-year lease, thus providing a great deal of permanence. In others, a short-term agreement can serve to thwart an imminent threat, thus creating a window of time to design a long-term intervention. Finally, there are contexts in which a conservation incentive agreement can serve as a kind of trial period to rapidly demonstrate the benefits of conservation to various stakeholders, thereby serving as a prelude to the process of creating a formal protected area.

Distracts from efforts to foster sustainable development

Another objection sometimes raised regarding conservation incentive agreements is that they fail to catalyze sustainable development, and instead promote a form of dependency and welfarism among local communities. This argument characterizes compensation for desisting from habitat destruction as ‘paying local communities to do nothing’. In fact, conservation incentive agreements more commonly provide compensation in return for an active participating role in habitat and resource management by local communities. Doing so conveys direct benefits in the form of employment opportunities, as well as training and skills development that contributes to capacity in other arenas beyond conservation. In addition, benefits are often most effective as an incentive if targeted at the community level, in the form of social benefits in areas of health care, education, and basic infrastructure, which serve to facilitate other economic activities rather than reward people for ‘doing nothing’. By committing to long-term flows of benefits, a conservation incentive agreement provides ongoing investment in sustainable development, while conserving the resource base that may serve as the foundation for such development. In contrast, other conservation tools that seek to foster sustainable development have, in many instances, failed to achieve either ecological or financial sustainability, and have not resulted in readily replicable models of success. Instead, many such projects continue only because of continued injections of cash, never achieving self-sufficiency, resulting in dependency without strengthening incentives for conservation. In addition, forgoing destructive exploitation imposes real costs on local resource users. Without direct incentive mechanisms these costs are often borne by those least able to afford them, undermining conservation objectives as well as equity considerations.

Disenfranchises local resource users

Finally, some critics argue that conservation incentive agreements disenfranchise local resource users, limiting their access to resources and thus constraining their economic options. We believe a more constructive view is that local resource users control a precious commodity – natural habitat and biodiversity – and conservation incentive agreements offer them a way to generate

tangible benefits from that commodity. The net benefit to local resource users from participating in a conservation incentive agreement must be positive – they must gain more than they lose from changing resource use patterns – otherwise they would not voluntarily consent to an agreement. It is up to the conservation investor to offer a benefit package that makes it in the resource users’ interest to participate, and therefore the ultimate terms of the agreement typically are the result of a negotiation process. Thus, far from disenfranchising local resource users, conservation incentive agreements empower them by expanding the range of options available for generating benefits from the resources at their disposal.

Lessons learned about the approach so far

Pilot projects using the conservation incentive agreement approach in several different scenarios have generated a number of lessons about the model. The following discussions highlight a few key lessons, namely those relating to flexibility, cost, and factors critical to success.

Flexibility

The variety of conservation incentive agreement projects described so far in this document indicate the flexibility of the tool, covering ecosystems ranging from tropical rainforest in large wilderness areas as well as hotspots to marine turtle nesting beaches and reef fisheries, and involving parties ranging from national governments to private landowners and indigenous communities. In fact, the diversity of contexts in which incentive agreements can be applied essentially matches that of more traditional agreements for destructive resource use. In so doing, incentive agreements address a “missing market” for biodiversity conservation that is every bit as agile as markets for destructive resource use. The key to applying this tool in different settings lies in creativity on the part of implementing parties with respect to adapting the basic *quid-pro-quo* of conservation for direct negotiated compensation to the available legal mechanisms in a given setting.

As a consequence, the legal mechanisms used in incentive agreements vary widely from country to country. CI’s conservation concession in Guyana is based on a 30-year renewable timber sales agreement under the country’s Forest Law; the CSSL/RSPB initiative in Sierra Leone is based on a similar approach. In Peru, there is now a section of the Forestry Law that allows any group who can demonstrate the financial and technical capacity to manage the area in question to apply for a rolling 40-year lease, but does not require royalty payments or lease fees. In the Solomon Islands, the proposed vehicle is a timber license in one case (in collaboration with local traditional resource owners) and, in another case, a locally managed provincial protected area. Regulations in Papua New Guinea provide a variety of mechanisms which can readily be adapted to conservation incentive agreements, while Fiji’s forestry laws specifically define a process for negotiating with and compensating landowners in return for creating nature reserves in areas under customary land tenure. CI is using easements and agreements with private and indigenous landowners in Ecuador and with private landowners in Venezuela, where the owners of several large cattle ranches abutting a protected area are interested in setting aside conservation areas to protect watershed services and enhance ecotourism assets. Birdlife International is pursuing an agreement with a timber concessionaire that already has rights to an area, as is TNC in Borneo. The overarching lesson is that with some creativity, it is almost always possible to ground conservation incentive agreements in existing legal frameworks, even in cases where legislation and property rights regulations do not specifically address conservation issues.

Costs

The cost of implementing conservation incentive agreements varies widely and thus defies generalization. In an informal review of 19 projects, including those described throughout this document, actual and estimated annual recurrent costs range from \$0.04 per hectare for a project involving an enormous indigenous reserve in Brazil to \$50.0 per hectare for a project involving forest restoration in Peru. Excluding these two projects, which are the largest and smallest surveyed respectively, sizes of the areas in question range from 5,000 to nearly 1,000,000 hectares and projected annual project costs per hectare range from \$0.05 to \$15.00 per year. Weighted by size of the areas to be conserved, the average annual per hectare cost is about \$1.30 per hectare. Total annual costs of the projects are less variable. Although the extremes range from an estimated \$25,000 per year for a project on private lands in Venezuela to \$500,000 per year for the project involving 11.5 million hectares of indigenous land in Brazil, most projects tend to fall within the range of \$75,000 to \$150,000 per year regardless of size due to fixed costs of a minimum set of activities including monitoring and day to day management and coordination.

Thus, conservation incentive agreements, while presenting a potentially very cost-effective option for achieving habitat protection, can require a considerable investment. In fact, critics of the approach have voiced objections to *both* the cost effectiveness and the expense. Asymmetries in bargaining power between international conservation organizations and communities in developing countries lead some critics to worry that negotiated deals may unfairly disadvantage local resource users. Other critics worry that providing direct compensation for conservation services will burden conservation organizations with onerous fundraising obligations. In other words, conservation incentive agreements may be too cheap, and they may be too expensive. When implementing the approach, both concerns must be kept in mind, since inequitable compensation will undermine the longevity of the agreement while exceedingly expensive agreements will be difficult to finance. Moreover, the incentive package must also be designed so as not to overwhelm the capacity of local economies to absorb investment. An additional complication is that opportunity cost may rise over time, so the incentive agreement and associated financing mechanism must be designed to mitigate this risk and/or accommodate changes. The key is that an incentive agreement hinges on a mutually agreed level of compensation, arrived at through negotiations based on transparent, participatory stakeholder engagement. In addition, implementers have to recognize that in some cases the approach may simply be too expensive at a given site under prevailing legal, political, social, or economic conditions. However, a critical point to remember is that biodiversity conservation represents a valuable service that generates global benefits, so that in many circumstances conservationists should be willing to remunerate those in a position to provide this service.

Factors critical to success

In addition to gaining further experience with incentive agreement costs, we've found that a number of factors are critical to successful project implementation. One of the most important factors is an effective on-the-ground implementation presence. This presence can be provided by in-country staff and/or partner organizations, but there needs to be a party responsible for continual interaction with the multiplicity of stakeholders typically involved in an incentive agreement project. Also, the process of implementing a conservation incentive agreement often involves many adjustments in response to rapidly changing political, institutional, social, or economic conditions, and it is important that someone be on the ground such that changing

conditions are immediately observed and taken into account. To some extent, this holds true for any conservation project (or other types of projects, for that matter), but since the direct incentive approach will be new to many stakeholders, it is especially important that there be someone to provide immediate feedback, explanation, and assurances as questions and concerns arise.

The importance of an on-the-ground presence is closely linked to a second factor for success, which is continuous stakeholder engagement. Particularly in projects that involve local communities, there needs to be a consistent, on-going demonstration of engagement and commitment. Doing so instills confidence, and reinforces the formal aspects of a conservation incentive agreement with relationships that facilitate dialogue, negotiation, and information sharing. This way monitoring and enforcement activities become less of a confrontational relationship and more of a collaborative partnership. In addition, continuous engagement lessens the likelihood that stakeholders will lose interest and turn to other parties, such as timber companies, in search of a 'better' offer.

To negotiate and secure a conservation incentive agreement, it is essential that resource owners be organized such that there is a clear counterpart to the conservation investor. It is also important that resource owners are in a position to effectively control resource use. For instance, in a communal land tenure context, it will be difficult to enter into an agreement unless landowners are institutionally organized so that they can make collective commitments. In some cases traditional governance systems suffice, in others some form of community-based organization may have to be created. The crucial thing is that the entity that enters into the conservation incentive agreement is able to effectively manage resource use and deliver conservation outcomes; otherwise, they may be entering into commitments that they cannot meet. If, for example, only half of the population surrounding an area under conservation management commits to restraining subsistence hunting, it may be difficult to hold them responsible for outcomes related to wildlife population trends. Similarly, entering into an agreement with a community may be meaningless if local or national government retains the right to grant timber concessions, and is not involved in the project.

With respect to the implementation process, we and others have found that a key factor for success is a step-wise progression to a long-term agreement. Given the importance of institutional strengthening, development of relationships, and confidence building, the situations where a project can proceed directly to a long-term agreement will be rare. Instead, successful projects tend to include an introductory, or trial, phase, during which the various parties to an agreement build familiarity with the parameters of the agreement and with each other. Indeed, it is only natural that people will want to test an arrangement before agreeing to a long-term commitment. Such a trial period also allows the conservation investor to fine-tune models of financing requirements for management of the area in question, and complete fundraising for long-term financial support of the overall initiative.

As indicated at several points in this discussion, we believe that the biggest lesson regarding conservation incentive agreements is that they are readily adapted to many different contexts. However, it is also important to note that the approach will not work everywhere. Any of a number of factors may make it difficult to implement an incentive agreement in a given situation, ranging from political resistance to exorbitantly high costs. Sometimes conditions are in flux such that it pays to wait for a more opportune time to implement the approach. However, it also seems that when the conservation incentive agreement model is ill suited for a particular situation, most other tools will also be very difficult to implement. In any case, before proceeding with a conservation incentive agreement initiative, it is critical that a thorough

feasibility study be conducted to assess the legal, institutional, political, social and economic context, as well as the biological importance of the site in question.

Scaling up the conservation incentive agreement approach

The potential applications for this approach are extremely broad. Incentive agreements can be designed for vast stretches of rainforest in the Congo Basin, as well as small plots harboring critical populations of particular species. Conservation deals can be negotiated with national governments, remote communities, private companies, or any other counterparts who are in a position to deliver biodiversity conservation services. Agreements can seek habitat protection in perpetuity, or counter immediate threats and buy time to design long-term solutions. Maximizing the potential of incentive agreements to achieve conservation of global biodiversity will require effort in several areas to scale up the use of the approach.

Continued demonstrations

The most effective way to spread awareness of the approach and persuade various stakeholders of its promise is to continue implementing pilot projects. Additional successes will broaden financial support for the approach among donors, encourage governments to embrace the tool in policies and legislation, cultivate implementation capacity within the conservation NGO community, and build confidence among local communities that participating in conservation can yield tangible benefits. More pilot projects are needed in Sub-Saharan Africa in particular, as the bulk of current initiatives are found in Latin America, East Asia, and the South Pacific.

Educating donors

In the short term, the greatest constraint to application of conservation incentive agreements may be funding, especially in terms of the types of funding available for conservation. Many conventional sources of funding do not support the long-term recurrent cost of conservation management. Instead, they seek to provide initial implementation funds, with the expectation that a project will become financially self-sufficient after a given period of time. However, examples in which projects attain such financial self-sufficiency are few and far between (Wells *et al.* 1999). We must promote awareness of this reality of conservation finance among the donor community, placing a strong emphasis on the essential role of dedicated endowments to support individual projects over the long term.

Exploiting development synergies

Given that sites of conservation interest often are in poor rural areas that are also of interest to development institutions, there is significant potential for collaboration with other NGOs, government bodies, and bilateral or multilateral agencies receiving development funding. Incentive agreements, particularly those with local communities, typically require a significant investment in relationship building, and a conservation organization's relationship with a community can greatly facilitate the delivery of development investments. For example, a conservation incentive agreement often involves support for institutional capacity-building to strengthen a community's ability to manage resources, which can also be valuable with respect to development objectives. Investments in development, in turn, can form part of an incentive package in return for collaborating in conservation management. Scaling up the use of conservation incentive agreements will benefit greatly from concerted efforts to seek out opportunities for collaboration of this kind with mainstream development organizations.

Fostering consistency

The concerns raised about conservation incentive agreements often reflect misunderstandings about the approach. Therefore it is important that CI and others working on conservation incentive agreements continuously engage other partners and governments to ensure clear and consistent articulation of the rationale and application of this tool. It is also important to maintain consistency in message and execution during implementation of incentive agreement projects. This engagement includes active collaboration in implementing projects, as well as dissemination of lessons learned through publications, presentations, and other forms of exchange between policy-makers, scholars, and conservation practitioners. Doing so will have the added benefit of contributing to the effort of educating donors about the approach.

Conclusion: The Need to Refocus the Conservation Community

At present, the conservation community is not focusing as much effort as it could on channeling global willingness to pay for conservation to those willing to provide it in exchange for appropriate incentives. Addressing the missing market for biodiversity will require intermediaries between global demand and potential suppliers of biodiversity conservation services. The conservation community, and principally the large conservation NGOs, are in the best position to serve as these intermediaries, but are currently not well organized to do so. This is perhaps not surprising since providing direct incentives to resource owners is a relatively new approach in international conservation. Nevertheless, this is an important issue since the absence of requisite expertise and organization may ultimately be the most significant obstacle to wider adoption of this approach.

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ANNEX

Conservation Agreements: Model, Design and Implementation

October 2007

*Conservation International
Conservation Stewards Program
Conservation Economics Program*

Conservation Agreements: Model, Design and Implementation²

The Conservation Stewards Program idea

Making biodiversity conservation a viable choice for local resource users through conservation agreements that provide tangible benefits in exchange for effective conservation of high priority areas and species.

The Conservation Agreement Model

For implementers involved in CSP-funded projects, as well as others interested in following the same model, this document provides guidelines for implementing conservation agreements. The main steps are summarized as follows:

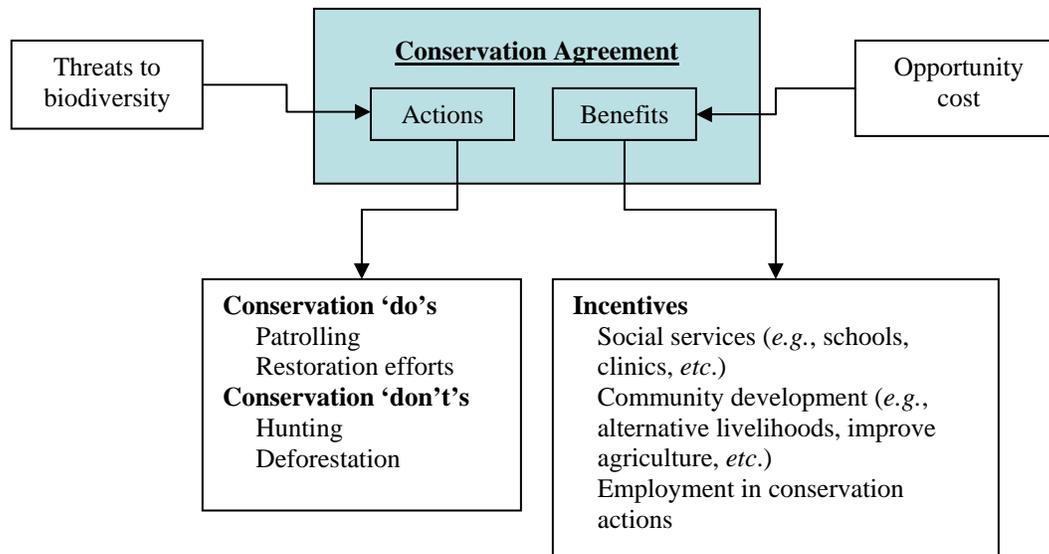
- Choose sites based on a rapid *feasibility analysis* conducted prior to agreement design.
- Begin engagement by *building a relationship* with interested resource owners/managers in a transparent and participatory manner.
- Build on this relationship *to design and formalize an agreement* that is
 - a) *win-win* (benefits both biodiversity and the resource owner/manager), and
 - b) *quid-pro-quo* (the provision of benefits is conditional on conservation performance).
- Before implementation *build socio-economic and biodiversity baselines and define a monitoring system* for both.
- During the *implementation* phase meet commitments punctually and facilitate the resource owners/managers in meeting theirs.
- Consider an initial short-term “trial” agreement to allow both parties to *evaluate and refine agreement* for the long term.
- If a long-term agreement is sought, work together to *“sell” the agreement to potential funders*.
- Throughout the implementation of the agreement apply *biological and socio-economic monitoring* systems.
- Throughout the process, contribute to improving the model by *participating in a global learning network of implementers*.

² The conservation agreement model is an evolving concept, and therefore this document is subject to continued revision and refinement. For the most recent description of this model, please contact Jason Berry at j.berry@conservation.org.

Summary of the Conservation Agreement Approach

The Conservation Agreement specifies conservation actions to be undertaken by the resource users, and benefits that will be provided in return for those actions:

- The conservation actions to be undertaken by the resource users are designed in response to the threat to biodiversity.
- The benefits are structured to offset the opportunity cost of conservation incurred by the resource users.
- In addition, the Conservation Agreement details the monitoring framework used to verify execution of the conservation actions, and the sanctions to be applied if conservation actions are not executed.



The **opportunity cost of conservation** reflects the value of what resource users give up by not utilizing their resources under the business-as-usual scenario. This is the balance of:

- The income that would be derived from destructive resource use such as clearing for agriculture or timber extraction (*e.g.*, the value of crops or timber that would be harvested in the absence of conservation)
- The costs that would be imposed by destructive resource use (*e.g.*, reduced water quality, soil erosion, loss of culturally significant resources)

The sum of foregone income from resource use minus the sum of avoided environmental costs is the opportunity cost. In some cases, resource owners may not recognize the environmental costs of resource use, resulting in a difference between actual and perceived opportunity cost; during engagement and negotiations the conservation investor can try to enhance resource owners' understanding of environmental costs to reduce this difference. In any case, to secure an agreement, the benefit package must be designed to offset the opportunity cost that resource owners believe they incur.

Implementation Model

Phase 1: Site Selection and Feasibility Analysis

Step 1a. Rapid initial assessment (2 weeks)

When considering whether a site is potentially suitable for a conservation agreement, think about the following five elements which will allow you to decide whether to pursue a more in-depth feasibility analysis (Step 1b below). These criteria will also help prepare an initial proposal to a donor or to decision makers in the institution. Projects should generally proceed only if:

1. The project will achieve a valuable and measurable conservation outcome (*i.e.*, species protected, number of hectares protected, number of hectares connected).
2. There is a capable implementer with sufficient time to devote to project design and implementation. The implementer must be able to conduct engagement activities, negotiations and follow-up of the agreements in the field, and support the overall process with technical expertise such as financial management, monitoring, fundraising, *etc.* An implementer may not have all these capacities in-house, but must be able to partner with others as needed. *See Box 1.*
3. There is a local resource owner or user who can serve as a clear agreement counterpart (*i.e.*, an entity or entities who are interested in the conservation outcome, or for whom a conservation agreement could make the conservation outcome attractive).
4. The actions required to achieve the conservation outcome can be performed by the counterpart, or the agreement can enable the counterpart to perform these actions.
5. There is some other attractive characteristic to the site, *e.g.*:
 - The site is known to be likely to score high on all feasibility criteria (below)
 - The project offers a valuable learning experience regarding the potential of the model (new type of implementing partner, funder or legal mechanism)
 - The site is attractive and easily could be funded or a funder is already identified.

Box 1. Engagement Team Composition

Few implementers will have all capacities needed to execute all the steps of the model in-house. However, an effective implementer must be able to partner and obtain support required for the different stages of the model. One key piece of the implementer team that should be a constant is the **engagement team**. The engagement team is the person or group of people who establishes, builds and maintains the relationship with the resource user. They are the face of the project to the resource user and deal with the day-to-day activities of implementing agreements. It is crucial that this team remains as constant as possible so the relationship with the user is strengthened.

Different types of implementers and engagement teams

Cambodia: Due to the lack of strong local partners in the region, CI-Cambodia is directly implementing the process of designing and implementing conservation agreements around the Central Cardamom Protected Forest. The implementer team is composed of CI staff in Phnom Penh, the capital city, such as biologists, financial staff, general direction and coordination through the country program director, and by staff in the field who are the “community engagement team.” The engagement team is composed of CI Staff who spend most of their time with the communities implementing the agreements.

Madagascar: CI Madagascar works through partners. In this case the implementer team is the combination of CI staff in Antananarivo, Tamatave and Fianarantsoa plus staff from WWF and ASOS (Association Santé Organization Secours). WWF and ASOS are engaging directly with the communities in the buffer zones of the Ankeniheny-Zahamena and Fandriana-Vondrozo protected areas. The engagement team then is WWF and ASOS staff working directly with the communities, discussing, designing, negotiating and following up the implementation of the conservation agreements.

Step 1b. Feasibility Analysis (2 weeks – 6 months)

For projects that pass a rapid initial assessment, a formal analysis of feasibility is needed. Much of the information necessary for this analysis likely will be known already to the implementer and potential partners, but some fieldwork and additional study may be needed. If fieldwork requires engagement with the potential counterparts, it is especially important to avoid raising their expectations about the project prior to completing Phase 2 (Engagement) and Phase 3 (Defining the Agreement) as outlined below. The principal criteria to be considered in the feasibility analysis are as follows:

1. Biological priority: How important is the site? This will be an elaboration of the conservation outcome defined in Step 1a. If the information demonstrating the site's priority is insufficient, some further biological assessment may be necessary during the feasibility analysis to demonstrate conservation priority and help target conservation actions. When conducting further assessments, bear in mind the need for a biological baseline for future monitoring.
2. Threats to biodiversity: What are the major threats and how difficult will it be to address them? What conservation activities are required to reduce/eliminate the threat?
3. Ability of the resource users to be an effective conservation partner, including:
 - Interest in engaging in an agreement
 - Interest in conservation
 - Tradition (cultural and religious factors) in resource management
 - Effectiveness of decision-making structures
 - Capacity to enforce rights
 - Capacity to perform conservation actions (cost of building those capacities if they are missing)
4. Resource rights: Does the proposed counterpart hold the legally recognized rights necessary to achieve the conservation objective? If not, can those rights be obtained? Alternatively, is the *de facto* situation conducive to an agreement? Resource rights are among the most complicated yet important features of a given context; use the above as guiding questions but think about additional issues related to rights that are relevant to your site.
5. Legal context: How strong are the available legal options for protection? Can existing laws be adapted to achieve protection objectives? Are ownership/user rights legally enforceable? Do overlapping rights conflict with biodiversity objectives (*e.g.*, subsurface mineral rights)? Is the rule of law reliable (*e.g.*, effective court system)? What is the relationship between formal and informal legal systems? As with rights (4 above), these are examples of key questions related to the legal context; however, depending on your site, you may need to explore additional or different questions.
6. Policy context: What is the likely effect on the project of supportive policies (*e.g.*, government support for indigenous land rights) and of unfavorable policies (*e.g.*, policies that support oil/mining concessions)?
7. Capable implementer: How capable is the implementer, including:
 - Shared objectives with CI
 - Good relationships with the community or a track record of good relationships in similar places
 - Capacity in anticipated activities (*e.g.*, community engagement, reforestation, species management, patrolling, *etc.*).
 - If additional actors are needed to deliver development benefits (*e.g.*, agricultural extension), their availability and capacity should also be assessed.
8. Stakeholder and conflict analysis: Who are all the parties who need to be engaged? What existing or potential conflicts will need to be resolved or managed? Below are recommended steps to conduct stakeholder and conflict analysis.

- A small meeting/workshop with close partners (implementer’s staff, partner implementing institutions and community representatives, as well as government staff if applicable). This event should be at most 1 day long, attended by no more than 10-12 people. Products of this meeting should include:
 - A list of key actors relevant to the site
 - A “map” of the relationships between those actors; and
 - A “map” of the conflicts between actors.

Several participatory rural appraisal tools are available. CI has worked with Eco-mapping in Brazil and the Andes and the “Conflict map” in Cambodia. While identifying formal decision makers, it is also important to identify informal processes and informal leaders and include them in relationship and conflict maps. In some cases separate follow-up meetings may be needed with government or community actors, especially in contexts characterized by conflict and/or informal decision-making systems.
 - The process of “conflict mapping” will generate a list of potential conflicts. Each of these must be assessed, and options for conflict resolution or management should be developed, taking into consideration what is needed to resolve the conflict and how this might happen (*e.g.*, traditional informal resolution versus “formal” approaches). In some cases conflicts may be intractable, in which case the agreement may not be feasible. The main product of this effort is a short document describing the conflicts found and strategies to address them.
 - Finally, this information will provide a clearer picture of the stakeholders involved and the conflicts to be resolved or managed. The product at the end of this process is a strategy defining how to work with each stakeholder.
9. Project costs: What are the estimated costs of the project and how affordable are they? Cost estimates should include:
- Design stage: cost of designing the agreement (*e.g.*, workshops, travel, meeting materials, additional studies in the engagement and design phases)
 - Implementation stage:
 - Management costs
 - Protection/enforcement (*e.g.*, demarcation, patrolling)
 - Conservation activities (*e.g.*, reforestation, zoning)
 - Socio-economic and biological monitoring
 - Community benefits
 - Compensation for management activities (*e.g.*, wages)
 - Offset opportunity cost (*e.g.*, value of forgone timber)
 - Cost of long-term technical support
 - Cost of fundraising activities to secure long-term finance
10. Financing options: What are the prospects for securing financial support for design and implementation activities, as well as long-term sustainable funding? Options to consider can include bilateral and multilateral institutions, corporate and private donors, foundations, payments for ecosystem services, *etc.*

The key output of the feasibility analysis will be a narrative report derived from the table below, typically about 5-20 pages in length with supporting maps as appropriate. It is recommended that the feasibility analysis report include a map that depicts the area where the project will take place identifying land use, location of the threats, tenure and conflicts. *See Box 2.* The report and table will support an informed judgment regarding the feasibility of the project. No project will have entirely favorable conditions, but it is important to remember that no single criterion should be seen as a decisive factor. Instead, it is the balance of these factors, placed in the context of competing alternatives (in terms of sites as well as approaches), that will yield a concluding

Phase 2: Engagement (1-6 months)

In the engagement phase the implementer presents the conservation agreement concept to the resource user (potential counterpart), setting the stage and ground rules for design and negotiation of the agreement. The purpose of the engagement phase is to present what an agreement is and how it works, and ends with a mutual decision to proceed with formulation of specific agreement terms. The steps for engagement listed below are mostly in chronological order, although several may already be completed or easy to complete if the implementer and the resource owner are already working together on other initiatives.

Step 2a. Select the engagement team. From the implementer identified in the Feasibility Analysis, determine who are the people who will be interacting with the resource users throughout the course of the project. Ideally the engagement team will already have a solid relationship with the resource owner, or must be able to build such a relationship. The team must understand the power structures and formal and informal decision-making systems of the resource users. It is important that the composition of the team remains constant throughout the project.

Step 2b. Develop an engagement plan. Once the engagement team is identified, it must draft a plan (1-5 pages). This plan should include:

- A clear, easily communicated articulation of the conservation outcome
- Initial proposed conservation responses to the threat, subject to revision during the engagement and design process
- Timeline/number and schedule of meetings required to present the agreement idea
- The representative groups that the engagement team needs to meet with (this could range from a small number of leaders to the entire community, as appropriate)
- Formal and informal communication systems that will be used to exchange information and perspectives
- Materials required for presenting the agreement idea (maps, pictures, lists, *etc.*)

Step 2c. Transparent exchange of ideas with the proposed counterpart. This includes the implementer telling the counterpart who they are, the general conservation outcome they are after, and their initial idea for the agreement mechanism (*i.e.*, an illustration of a conservation agreement elsewhere). The idea presentation should be simple and well articulated so everyone in the discussion understands the concept. Initial discussions should also include learning about the counterpart's goals, activities, and interests, and their initial impression about the proposed agreement. *See Box 3.*

Step 2d. Verify shared understanding of agreement concept. Before concluding the engagement phase, the implementer must ensure that the engagement team has succeeded in conveying the conservation agreement concept to the representatives of the potential counterpart. Tools such as role playing can confirm that resource users are clear about the implications of entering into an agreement and how it would operate, to ensure that the potential counterpart is in a position to make an informed decision on whether to proceed. *See Box 4.*

Step 2e. Decision by both parties to continue. Once the idea is presented, the representatives should have as much time as they need to communicate with their constituency and discuss the desirability of designing an agreement with the implementer. The implementer should seek to confirm that the decision made reflects the sentiment of the wider resource user group. At this point, the implementer should also consider if they wish to continue engagement. If the implementer and counterpart decide to continue, they should agree on the process to be followed, including timeframe, steps, negotiating teams and roles and responsibilities. The product of this discussion is generally (but not always) a written document stating a joint

commitment to work together to define a conservation agreement according to the agreed upon process. This is *not yet* a commitment to specific conservation outcomes or activities - details of the actual conservation agreement are developed later.

Box 3. Role Playing in Cambodia

In the Cambodia conservation agreements, community institutions called Commune Natural Resource Management Committees (CNRMCs) are the representatives with whom CI discusses and negotiates agreements. Responsibilities of the CNRMCs include communicating to the rest of the community the concept of a conservation agreement, the commitments involved as well as the potential benefits, and, during the implementation phase, disseminating information about the agreements throughout their communities. To assess their ability to do so, we conducted role-playing exercises following our discussions, in which one CNRMC member demonstrated how he would explain the agreement to a villager, played by another CNRMC member who asked questions one might expect from community members. The group (CI engagement team and the rest of the CNRMC) then evaluated the simulated conversation to assess the effectiveness of information transmission. During the implementation phase, randomized surveys assessed the level of village awareness and understanding of the agreement, and part of the benefit package (an administrative fee paid to the CNRMC) depends on achieving a minimum level of village awareness as demonstrated in the surveys.

Step 2f. At any time during engagement. It may be useful to arrange trips or exchange visits with agreement counterparts to show the negative impacts of resource destruction in degraded areas, or the benefits of conservation incentive agreements at successful project sites. This may be particularly useful in remote areas in which such impacts have yet to be felt.

Successful completion of the engagement phase should produce:

- A clear idea of who can *legitimately* design and enter into an agreement on behalf of the resource users
- Documented agreement of a decision to work towards a conservation agreement
- A clearer vision of what an agreement would look like (*i.e.*, conservation actions and benefits)
- A refined estimate of the implementation costs should design stage lead to a signed agreement
- If funding for implementation (Phase 4) has not been secured, a plan to do so during the design stage.

Box 4. Presenting the Conservation Agreement Concept

This is an example based on experience in the Solomon Islands showing the process of presenting the conservation agreement idea to a community.

1. Introduction
 - a. This is a new idea for a conservation area: it is based on a formal agreement between a community and conservation investors who value intact Solomon Island forests and human livelihoods within those forests. It is called a Conservation Agreement (CA).
 - b. This sort of agreement depends on community commitment to maintaining their forests intact.
 - c. The choice of whether to work on an agreement with us is entirely up to the community, but we only want to work with communities who have a serious collective interest and ability to organize and unite to protect their customary lands into the future.
 - d. We know that recently there have been many changes to the everyday lives of Solomon islanders, *e.g.*, the necessity of education, access to modern medical care. These require cash, which has previously been available only from loggers.
 - e. This idea helps interested communities both access education and medical care and also maintain their forests. Again, the idea is a formal agreement to maintain forests – communities benefit from both intact forests themselves and our support for their development priorities (perhaps give examples like scholarships).
2. The idea and benefits of a conservation area:
 - a. There are many values from maintaining intact forests on customary land, including wildlife, water, building materials, etc. These benefits are protected under a CA and remain available to the children and grandchildren of the customary owners.
 - b. In a CA, in addition to these benefits, if a community commits to and maintains a strong community conservation area, they receive benefits from us. These benefits need to be discussed, but might include:
 - i. Scholarships for school fees and other educational needs
 - ii. Assistance in accompanying family members on medical evacuations
 - iii. Help protecting their lands from loggers
 - iv. A relationship with us, where we can help them link their development ideas with other funders/NGOs working on development projects
 - c. The community always keeps their land rights
 - d. The mechanism works by communities designing, with our help, a conservation area, and then entering a partnership to raise funds to support their choice.
3. Characteristics of a conservation area that will make it work best for conservation and most attractive to funders:
 - a. Because the mechanism is a partnership to raise money to support the CA, the more attractive the conservation area, the more likely that we can get funds for it, and that those funds will be sustainable in the long term. We think that if a community makes a strong commitment to protecting a significant portion of the natural wealth of the Solomons, there is an excellent chance that the agreement will be funded (a good metaphor here is that when you take something to the market, the higher its quality, *e.g.* some really delicious fish, the more likely it will be purchased). Attractive characteristics are:
 - i. No land tenure conflicts; the conservation area should have clearly defined boundaries that can be registered with the authorities as clearly belonging to the community involved
 - ii. An area that is large, rich with wildlife and plants, and as intact as possible. We can help them pick areas that will be attractive if they want.
 - iii. While it is important to design an attractive area, the mechanism is a commitment by the community to protect those areas. We will help them do that protection under an agreement, but if they do not really protect it, they will not receive our support anymore. It is therefore important also that they design something that they plan to/are able to implement, *e.g.*, not an area that someone in the community is going to log in the next five years.
 - b. A mapping exercise might be fun and useful if it is appropriate at this point, if not, that can begin during later visits.

- c. NOTE: we have found it useful to leave behind in each community a big piece of paper with the key characteristics written on it, so they can meet, plan and design in between our visits.
- 4. What is the CA mechanism exactly, and how does the process go?
 - a. The community and us design and designate a conservation area, its rules, and how it will be managed. We help them to make it attractive to donors, resolve conflicts, provide technical support (*e.g.* GIS), but this is at the discretion of the community. This can be as collaborative as the community wants, but if the area isn't attractive, it will be hard for us to get it funded, so it is useful to work with us.
 - b. Agree with us on benefits – these will be based on the characteristics of the area that the community is willing to designate. Again, the agreement has to be attractive to potential funders, in terms of its area, the community commitment, and the cost. NOTE: in some places, it has been appropriate to use the comparison to a market again, *e.g.*, many communities are looking at this mechanism so it is like each of them bringing a T-shirt, a fish or whatever to market: people will buy the one that is the best quality and the lowest cost. This may or may not be appropriate here.
 - c. We and the communities design a clear agreement, including parameters like area, rules, benefits, and verification of commitment.
 - d. A trial period of implementation, where we both sign an agreement for 1 or 2 years, and see if we like it, they evaluate if we are serious and vice versa. There is no long-term commitment from either party either during design or the first year of implementation. Then if we are both happy, and the agreement is attractive to funders, we sign a long-term agreement.
- 5. Next steps:
 - a. This meeting was to present and discuss an idea. NOTE: it has been useful in other places to leave behind a calendar of next steps, as well as anything else that may require community consideration (*e.g.* noting that land tenure stays with them, *etc.*).
 - b. Schedule next meetings if they want, depending on how the first meeting goes. If they want some time to think, we could come back after an agreed-upon time period and they could then say a formal yes or no. If they are ready to say yes now, they could start figuring out where the conservation area goes between now and our next visit.
 - c. Note: we have found it useful to say in closing that there is no obligation at this point, but if they are interested, we believe that we can help them create a conservation area that will provide real benefits for them and their children, grandchildren, *etc.*

Phase 3: Designing the agreement

Once the parties have agreed to work together, activities for designing the actual conservation agreement begin. The steps outlined below describe the key components of conservation agreements as well as several additional assessments that may be useful as agreement design proceeds. Either party is free to withdraw from the agreement design process if at any point in time they feel that a satisfactory agreement cannot be negotiated.

Step 3a. Components of the agreement

All agreements should contain the following basic components, formulated jointly through a participatory negotiation process:

1. **Conservation commitments:** This section of the agreement explicitly defines the conservation outcome and the actions to which the parties to the agreement commit to achieve that outcome. Biological and other evaluations may be needed to help define the specific conservation targets and strategies, as well as the baselines necessary for the monitoring framework. The components of this section are:
 - Conservation outcome (*e.g.*, what species will be protected? If the outcome is a protected area, what are its size, location, legal status?, *etc.*)
 - Actions by the resource user (*e.g.*, create a community protected area, stop hunting a particular species, stop a destructive practice, don't grant logging rights, *etc.*)
 - Actions by the implementer (*e.g.*, capacity building, help in securing land rights, support in enforcement, *etc.*)
2. **Benefits provided to the resource user:** Determining what benefits are appropriate in a specific context can range from straightforward to complex, typically involving an iterative discussion to find the middle ground between community desires and what we can deliver. Key issues to define with regard to benefits include:
 - Value of the overall benefit package (*e.g.*, what amount of benefits is affordable and appropriate)
 - Type of benefit (*e.g.*, infrastructure, services, direct payments, enterprise, *etc.*)
 - If required, decision-making system for selection of investments (*i.e.*, benefit is direct payments to a community fund)
 - Mechanism for benefit delivery: A mechanism should be defined with the counterpart that transparently channels benefits to intended beneficiaries
 - Frequency of benefit provision. *See Box 5.*
3. **Compliance monitoring:** The success of the conservation agreement hinges on a credible monitoring framework to verify compliance with the commitments and justify sanctions in the event of non-compliance. Items to monitor include:
 - Compliance with conservation commitments (*e.g.*, no forest clearing, no hunting, no illegal mining, as well as performance with respect to conservation actions such as patrolling, boundary maintenance, *etc.*)
 - Effectiveness/equity of benefits management (*e.g.*, proportion of resource users receiving benefits, accountability for funds used, *etc.*)
 - Awareness, understanding, and satisfaction relating to the conservation agreementIn addition to monitoring compliance with the agreement, the implementer must arrange monitoring of biodiversity targets and socio-economic conditions.
4. **Sanctions for unsatisfactory performance:** Benefits must be conditional on the counterpart's compliance with commitments specified in the agreement. Sanctions (adjustments in benefits) for non-compliance must be designed jointly by all parties to the

agreement to ensure that they are understood, viable, and appropriate to the counterpart's culture. *See Box 6.*

- Procedure for identifying agreement breaches.
- Penalties for agreement breaches - sanction systems should be progressive, such that increasing number/gravity of transgressions results in stronger penalties.

Conservation commitments, benefits, sanctions, and monitoring provisions are the defining elements of a conservation agreement. Additional standard provisions for any agreement will include clear definition of the parties to the agreement, the duration of the agreement, procedures for dispute resolution, and the like. When designing and drafting the agreement, seek legal advice to ensure that the agreement conforms to local laws as well as donor expectations.

Box 5. List of Benefits Included in Agreements signed by CI & Partners

Education:

- Funding or supplementing salaries of one or more teachers at local school (Chumnoab and Thmar Daun Poev - Cambodia, DOUNGMA- China)
- Supporting physical improvement of school and community cultural facilities (Dingguoshan – China, Chumnoab - Cambodia)
- Scholarships for youth (Solomon Islands)

Agricultural & livestock extension services:

- Contracting a local NGO (CEDAC) for 1 year of technical support and training to improve agricultural productivity (Chumnoab, Cambodia)
- 10 Water Buffalos provided to help plough rice paddies to improve productivity (Chumnoab, Cambodia)
- Rehabilitating crop land with contracted tractors to allow for lowland paddy rice production in previously deforested lands (Chumnoab, Cambodia)
- “Mechanical Mules” bought by CI using community’s development funds (also provided by CI) at request of community (Thmar Daun Poev, Cambodia)
- Cocoa as an alternative livelihood crop (Chachi, Ecuador)³
- Training in improved grazing techniques (Namaqualand, South Africa)
- Provision of Anatolian sheepdogs to guard livestock from predators (Namaqualand, South Africa)
- Enabling drilling of a water borehole in the southeastern part of the farm (Namaqualand, South Africa)

Alternative enterprises

- Secure a buyer for criollo “sarrapia producers” (a seed) to sell to a perfume making company in Switzerland – Givaudan (Caura River Basin, Venezuela)

Land tenure assistance

- Technical assistance for legal designation of the reserve, including legal advice to address on-going invasion issues (Chachi, Ecuador)
- Assistance to formalize rights for community to use a farm being granted under a land reform scheme (Namaqualand, South Africa)

Financial compensation, cash for community development fund, *etc.*

- Community development fund developed by community to help support poor families, community meetings, the maintenance of plow machines, emergency support for sickness, *etc.* Fund was created with the administration fee that CI pays to the council to manage patrolling teams and oversee agreement compliance (Thmar Daun Poev, Cambodia)
- Community development fund developed by community to help support the poorest families that are not benefiting from the buffalo or patrolling wages (Chumnoab, Cambodia)

³ Community decided to invest in cocoa and used part of their compensation fund for that. This was not an additional fund for that agreement.

- Compensation mechanism, including the provision of compensation funds, established by the assembly in the amount of \$5/yer/ha (Chachi, Ecuador)⁴
- Price premium for meat sold to maintain the livestock limits (predetermined carrying capacity for land).; project feels this benefit should be used as a second to last resort.(Namaqualand, South Africa)
- Funding from private business partner (Givaudan) for community fund that will support long-run benefit provision (Caura River Basin, Venezuela)

Ecotourism development

- Funding of comprehensive ecotourism development plan (Doungma, China)

Salaries for patrolling & monitoring

- Salaries for patrol activities (\$5 per diem per person + patrolling equipment); community members take turns being patrol rangers so as to spread income benefit equitably around community (Chumnoab and Thmar Daun Poev, Cambodia)
- Equipment, training and salaries for rangers with patrolling group (non-rotating personnel) (Chachi, Ecuador)
- Training for biodiversity monitoring and wages and equipment for monitors (Namaqualand, South Africa)

NRM Planning

- Assistance in creating a plan for protection and NRM plan (Chachi, Ecuador)
- Assisting formulation of local community patrolling plan and regulations (Dingguoshan, China)

Communications

- Establish mechanisms for the coordination and exchange of information between the Centro Chachi and organizations that provide financial support to the Reserve (Chachi, Ecuador)

Box 6. Sanctions example from the 2006 Agreement in Chumnoab-Cambodia	
Transgressions	Sanctions
1-2 families with water buffalo violate the agreement	Families lose water buffalo, and commune receives warning of 50% reduction of benefit package in the following year
3 or more families with water buffalo violate the agreement	Families lose water buffalo, and commune benefit package for the subsequent year reduced by 50%
1-2 families without buffalo violate the agreement	These families go to bottom of list for receiving water buffalo, and commune receives warning of 50% reduction of benefit package in the subsequent year
3 or more families without water buffalo violate the agreement	These families go to bottom of list for receiving water buffalo, and the commune benefit package for the subsequent year is reduced by 50%

⁴ This is the fund referred to in footnote 2.

Step 3b. Additional assessments to be done by the implementer

Additional assessments may be needed prior to formalizing an agreement. These might include:

1. Capacity building: Once commitments are agreed upon, implementer and local counterpart capacity should be assessed to identify further capacity-strengthening needs. Capacity may be necessary in:
 - Implementing conservation actions (*e.g.*, defining a management plan, patrolling and enforcing, managing equipment, *etc.*)
 - Implementing economic alternatives (*e.g.*, coordinating agricultural extension, infrastructure building, education provision, *etc.*)
 - Managing finances (*e.g.*, budgeting, accounting, grant reporting, *etc.*)
2. Revised estimate of total project costs: At this phase the implementer must revisit estimates of the costs of the agreement and assess affordability. Cost components will likely include:
 - Benefits (including incentives and management costs)
 - Capacity building
 - Building awareness of benefits from conservation
 - Technical support by conservation and development staff including time, logistics, equipment, *etc.*
 - Monitoring of conservation outcomes
 - Maintenance and periodic replacement of capital equipment (*e.g.*, radios, GPS units, binoculars, *etc.*)

Key products of this phase include:

- An agreement signed and a plan to implement it
- A plan to build any additional capacity required so the resource user can comply with the agreement conditions
- A final estimate of the agreement costs.

It is recommended that the implementer and counterpart organize a ceremony to sign the agreement, as means to build pride and recognition of the agreement among the resource users. Bringing special guests and authorities increases the relevance of the signing ceremony, can enhance legitimacy, and strengthens commitment to the agreement.

Phase 4: Implementation

Once an agreement has been signed, the implementation stage begins. The implementer's activities in this phase focus on meeting their own commitments and on helping the local resource owner to fulfill theirs. This section describes two types of considerations that are important in most contexts: the first are responsibilities for which the implementer role typically shifts from day-to-day activities to periodic engagement. The second is a list of more general considerations for ensuring effective implementation of conservation activities and benefit delivery.

Step 4a. Initial implementation activities

This section describes the principal implementation steps, in rough chronological order. Many of these activities will also be necessary on an ongoing basis.

1. At the start of implementation:
 - The implementer should contract qualified, dedicated people to carry out capacity-strengthening necessary to enable counterparts to meet their commitments (as identified in step 3b above).
 - Ensure that all parties to the agreement have clear deliverables and obligations (*e.g.*, rangers have an obligation to conduct specified number of patrols, community leaders must be present when agricultural technical assistance is provided, *etc.*).
 - Ensure that there is a person responsible for overseeing the agreement from the implementer's side; this person will likely be the head of the engagement team.
 - If possible and not already done, identify a community "champion." This person's role may range from formal liaison for the project to consensus building among community groups to promoting the agreement among local stakeholders.
 - Gather baseline information. If during the design phase baseline information was not collected for either biological or socio-economic indicators, it must be gathered, ideally before agreement implementation begins.
 - Define biodiversity and socio-economic monitoring protocols and identify who will be implementing them.
2. Months 1-6:
 - Demarcation and signage: If the project is area-based, begin the process of demarcating the borders using a locally appropriate option (*e.g.*, clearing vegetation, planting a specific species, signposts, fences, *etc.*). For species agreements, install suitable signage advising would-be resource users of restrictions.
 - Dissemination: The engagement team and representatives of the resource users must ensure that everyone in the resource user group is aware of the agreement and the commitments, roles, and responsibilities it entails.
3. Months 6-12:
 - Participatory evaluation of progress: Early during implementation, the implementer and the counterpart should meet to discuss what aspects of the agreement are going well and what needs to be improved. This will help identify and address problems before they become too entrenched, while building trust and local support.
 - If the agreement appears to be going well, the implementer should begin developing a strategy to raise long-term funding and prepare for renegotiation.
4. End of year one and annually (or as agreed):

Monitoring: Although the monitoring system should be cost effective, it must provide the necessary level of quantitative information to assess three key sets of indicators: conservation outcomes, socio-economic trends, and agreement compliance. Any other performance metrics in the agreement may be included as needed (*e.g.*, use of benefits, communications and awareness, *etc.*)

Step 4b. General considerations for effective implementation

This section describes activities that must be performed while a conservation agreement is being implemented. They are mainly related to measuring progress towards biodiversity conservation, improvement of quality of life and compliance of the agreement. The results of these activities will allow for re-designing the agreement to ensure it effectively conserves biodiversity while people are satisfied with the arrangement. These activities are not optional and should be performed on a regular basis (*e.g.* annually or bi-annually)

1. ***Measuring progress in achieving conservation outcomes*** (biodiversity monitoring):

Biodiversity monitoring indicators and protocols were defined during the initial implementation stage. Protocols should be designed to track conservation targets regularly over time, taking into account seasonality when appropriate. Third party involvement in monitoring is necessary to guarantee objectivity of data collection as well as analysis of progress in achieving biodiversity outcomes. In addition, agreements will often benefit in at least three ways from involvement of resource users in biodiversity monitoring:

- a. Employment opportunity as an additional benefit under the agreement;
- b. Cost effective data collection throughout the year or season; and
- c. Enhanced knowledge, capacity and pride of community members that can strengthen the agreement and solidify commitment to conservation.

For priority species, biodiversity monitoring will typically focus on abundance, measured directly through transects and plots. For protected areas, monitoring will concentrate on habitat quantity and quality. Data collection options will vary from case to case but may include satellite imagery, overflights, water quality tests, third party monitoring of major access points to the resource, *etc.*

2. ***Measuring changes in socio-economic conditions of the resource users***: As with conservation outcomes, socio-economic monitoring indicators and protocols were defined during the initial implementation stage. Tracking socio-economic changes will show the contribution of the agreement to development as well as changes in resource users' perspectives on conservation and the agreement itself. Again, third party involvement is necessary to guarantee objectivity of data collection and transparency in reporting. For rigor, control sites should also be monitored if possible and cost effective, or the protocol can use regional statistical data (depending on quality and availability) to isolate the impact of the agreement on human wellbeing. The cost of data collection, which usually takes the form of household surveys and focus group discussions, can be reduced by involving local university students as enumerators. The following types of indicators should be considered when monitoring socio-economic changes:

- a. Awareness/understanding of the agreement (rules , benefits, duration, *etc.*)
- b. Overall satisfaction with the agreement
- c. Perceptions and attitudes towards conservation
- d. Community perceptions of changes attributable to the agreement
- e. Effectiveness of the benefits provided under the agreement (*e.g.*, was rice production improved by agricultural extension investment)
- f. Broad socio-economic changes (*e.g.*, income, educational attainment, health, *etc.*)
- g. Effectiveness of decision-making institutions and processes (*e.g.*, transparency, participation, *etc.*)

3. ***Assessing compliance with agreement commitments***: As discussed previously, monitoring compliance indicators is essential to the effectiveness of a conservation agreement. Such indicators include:

- a. Conservation commitments, relating to both pressure (*e.g.*, no gillnets, no traps, no snares, no logging, *etc.*) and response/management activities (*e.g.*, patrolling, reforestation, *etc.*)
- b. Management of the agreement (*e.g.*, appropriate use of funds, audited financials, reporting on conservation activities, *etc.*)
- c. Communications and information dissemination (*e.g.*, awareness, understanding, and satisfaction relating to the conservation agreement)

Finally, the implementation year concludes with feedback of monitoring information into the renegotiation process (whether for renewal of a short-term agreement or, if necessary, revision of a long-term agreement) and improved strategies for conservation management, delivery of benefits, communications, *etc.*

As the project matures, various processes should reach a stage where the implementer becomes less involved in day-to-day management. Standard procedures for benefit delivery, performance monitoring, *etc.* will evolve, such that implementer activities take the form of periodic application of established protocols rather than ongoing engagement. However, the implementer must continue to ensure that mechanisms are in place to allow prompt responses to implementation problems, community grievances, or the emergence of new threats to the stability of the agreement.

Phase 5: Moving towards sustainability

The most basic requirement for moving toward a sustainable agreement is effective initial implementation and feedback of experiences into improving implementation in subsequent years. Depending on the project, steps explicitly aimed at sustainability can begin sooner or later. This section describes several of these steps.

Step 5a. Negotiation and design of a long-term agreement

If the initial agreement was for a trial period and both parties are satisfied, they can proceed to negotiating a long-term agreement. Typically, this involves a commitment regarding the legal status of the area to be protected, and, from the implementer, a commitment to long-term benefits. In addition to what was included in the trial period, the long-term agreement needs to include:

1. **Development vision:** for more complex, long-term agreements, it may be valuable to support resource users in creating a long-term development vision that guides benefit package design and investment.
2. **Management plan:** In the case of a long-term agreement, develop a clear management plan to guide resource and habitat use over time as well as responses to threats to biodiversity. This plan should consider the counterpart's rights, culture and skills, and should be developed with the participation of the resource owner as well as other relevant actors (*e.g.*, government, law enforcement, surrounding communities, technical experts, *etc.*).
3. **Long-term monitoring framework:** Based on the monitoring protocols defined for the trial period, develop a cost-effective framework that can be deployed over the long-term.
4. **Long-term financing:** When committing to a long-term agreement, the implementer must design a long-term financing strategy, to cover ongoing activities as well as protect the agreement from potential increases in opportunity cost.

Step 5b. Sustainable funding

Although annual costs may decrease as start up/design/capacity-building activities conclude, most agreements will require sustainable long-term finance to cover ongoing conservation management, benefits, and monitoring. A number of options for sustainable finance are listed below. Since there are relatively few working examples of many of these options, implementers will need to be creative in developing additional opportunities, often combining options to meet the total recurrent need.

1. Create an endowed trust fund such that agreement costs are covered by the interest yield on the endowment capital. This option is the most straightforward and stable.
2. Harness an ecosystem service payment market (*e.g.*, carbon sequestration, watershed protection, *etc.*).
3. Convince a business to cover recurrent costs as an offset, *i.e.*, protection in compensation to the global community for damage they do elsewhere.
4. Find a product that can be produced by the resource user, for which a company is willing to pay a "green" or sustainable production price premium based on compliance with the conservation agreement.
5. Help communities develop and market a product which provides ongoing benefits, but for which some part of the marketing chain is managed by the implementer so that benefits remain contingent on satisfying the conditions of the agreement.
6. Provide up-front support for income generation in exchange for long-term commitment to use that income to cover agreement costs.

Step 5c. Additional ways to reinforce agreements for long-term sustainability

When designing strategy for sustainability, the implementer should consider additional elements that help encourage (or promote?) long-term adherence by the resource users to the agreement. Possibilities include:

1. Maximize employment and income generated by the agreement
 - Jobs that flow from the conservation agreement and/or depend on the conserved resource (*e.g.*, rangers, biologists, guides)
 - Income opportunities linked to the conservation agreement, particularly those arising from the conserved resource (*e.g.*, non-timber forest products, ecotourism)
2. Encourage acknowledgement of direct advantages provided by the agreement
 - Financial and in-kind value of the benefits themselves
 - Access to a reliable stream of benefits not tied to outside markets
 - Access to technical assistance, public services, *etc.* through the relationship with the implementer and other partners
3. Encourage recognition of direct and indirect benefits generated by resource conservation
 - Ecosystem services from conserved resources
 - Avoided negative social impacts often linked to destructive resource use (*e.g.*, loss of traditional values, alcoholism, spread of disease, *etc.*)
 - Protection of cultural and religious values linked to healthy resource base
4. Promote embracing of biodiversity as a value (*e.g.*, building pride)