

Creation of a Community Protected Area in Chachi Indigenous Territories in the Ecuadorian Chocó

Proposal for a Global Conservation Fund Project Implementation Grant, submitted by the German Technical Cooperation (GTZ) and Conservation International

PART 1 - BACKGROUND

1. Project Summary:

The activities proposed here support the creation and effective management of a 6,920 hectare (ha) reserve on Chachi Indigenous territories in the Northern Ecuadorian Chocó. The reserve covers an area of largely intact lowland forest connecting to the western border of the Cotacachi Cayapas Ecological Reserve (RECC) (Maps 1 and 2). Because the RECC itself contains little lowland forest, the community reserve would significantly increase protection of species dependent on this ecosystem. Conservation benefits also include the creation of a corridor to the RECC, and support for its management via improved buffer zone protection. Further, investigation of the possibility to expand the community reserve is already underway, with a medium term expected outcome of creating of a well managed “shield” along the entire northwest border of Cotacachi-Cayapas (Map 3).

Community reserve creation is based on a strategy designed during GCF/GTZ co-financed planning activities, which recognized the need to jointly promote conservation and development *in situ* if the former is to be successful in the Chocó. The reserve would therefore be created via a conservation incentive agreement in which three Chachi communities (Corriente Grande, Capuli, and El Encanto) would receive development support in exchange for the creation and effective management of a reserve. Development support would focus on needs prioritized by each community, including education, health, and improved agricultural production. This approach would make conservation a viable alternative to destructive resource use. Specifically, the communities propose to designate a strict protection area of 6,920 ha, surrounded by a buffer zone of 11,585 ha and sustainable use zone of 730 ha, in exchange for annual development assistance of \$5/ha/year based on the number of ha under strict protection. The incentive agreement would include additional support for necessary project personnel, monitoring and evaluation, and community reserve guards. The communities propose that the reserve be called “La Gran Reserva Chachi.”

Initial reserve implementation would cost \$ 318,897 over two years, with \$170,666 already secured from several sources, most importantly the GTZ. This proposal seeks a grant of \$148,231 from the GCF as key matching support. Specific activities to be funded include refining reserve management and compensation protocols, strengthening community institutions, reserve demarcation and management, compensation payments, monitoring and evaluation, and project staff salaries and logistics. Funds would also cover costs for rapid reserve expansion to Sabalito, a key neighboring community. Following initial implementation and any necessary modifications, if both parties to the agreement are satisfied, communities will grant the reserve permanent legal protection status in exchange for the creation of a permanent endowed fund to make compensation payments and cover additional reserve costs in perpetuity.

2. Project Applicant:

GTZ: GTZ in Ecuador works in two broad program areas: a) Modernization, Democratization, and Municipal Strengthening, and b) Sustainable Management of Natural Resources. The latter has three components: i) watershed management, ii) sustainable agricultural production and marketing, and iii) sustainable forestry, forest use policy, and protected area management. A cross cutting aspect of each of these components is a focus on the economic values of the environment, and all components are organized to contribute to broader goals at a national and international level, to have the greatest possible impact on environmental management. Specific goals include the creation of a fund in Tungurahua province to support the sustainable management of highland ecosystems via payment for watershed protection, production of certified agricultural and forest products, promotion of payment for carbon sequestration, biosphere reserve management, and community forest management.

The GTZ's Manejo Forestal Comunitario de Esmeraldas (MFC-E) program executes projects focused on many of these themes in Esmeraldas (the province in which the proposed reserve is located). MFC-E would be directly responsible for the implementation of the Gran Reserva Chachi.

CI: CI in Ecuador promotes the protection of endangered species by designing and implementing conservation programs in the most biodiverse regions of the country. The Gran Reserva Chachi is located in a key part of one of these regions – the Chocó-Manabi Corridor – and would contribute to several of the priority outcomes in CI's corridor strategy, including strengthening protected areas (the RECC), and promoting outcome-based conservation projects.

Additional detailed information on file.

PART II – PROJECT INFORMATION

1. Project Location:

The proposed reserve is located between 0 and 1 degree North and at approximately 81 degrees West. Elevations are largely below 500 meters.

Please see Maps 1 & 2

The easternmost boundary of the reserve, in the community of Corriente Grande, is contiguous with Cotacachi-Cayapas. An expansion of Cotacachi-Cayapas in 2001 made this connection stronger than assumed in our original GCF planning proposal (Map 4). To the Northeast of the reserve is a continuous band of Chachi and Afro-Ecuadorian communities, stretching to the Northern tip of the RECC. This band of communities is at the edge of frontiers for major logging operations, as well impending pressure to clear-cut forests for oil palm cultivation. The area to the South is still relatively inaccessible, but is also increasingly threatened by logging and colonization. There are several other Chachi communities to the Southwest.

2. Project Value:

BIODIVERSITY VALUE: The project area is extremely rich in endemic and endangered species. Although biological studies have been limited, the project area contains at least the following threatened species, registered in transects:

| Scientific name | Common Name | Redlist Status |
|---------------------------------|----------------------------|----------------|
| <i>Penélope orton</i> | Baudo Guan | VU |
| <i>Ara ambigua</i> | Great Green Macaw | VU |
| <i>Cephalopterus penduliger</i> | Long-Wattled Umbrellabird | VU |
| <i>Dacnis berlepschi</i> | Scarlet-Breasted Dacnis | VU |
| <i>Crax rubra</i> | Great Curassow | LR |
| <i>Ateles fusciceps</i> | Brown-Headed Spider Monkey | Subsp. CR |

Sources: Garrido et al. 2002, Piñero 2003, Arcos 2002

Interviews with community members suggest that the following are also present:

| Scientific name | Common Name | Redlist Status |
|-------------------------------|---------------------------|----------------|
| <i>Balantiopteryx infusca</i> | Ecuadorian Sac-winged Bat | EN |
| <i>Leopardus tigrinus</i> | Little spotted cat | VU |
| <i>Caluromys derbianus</i> | Woolly opossum | VU |

Sources: Piñero 2003, Arcos 2002

Berlepsch's Tinamou (*Crypturellus berlepschi*) is also likely found in the reserve area. The probability of this and other endangered species being present is reinforced by vegetation and socio-economic studies showing that a significant portion of the reserve remains in undisturbed forest that is locally still considered difficult to access, and is therefore not subject to significant exploitation. Species found in the reserve that are indicative of relatively intact ecosystems include: River Otter (*Lontra longicaudis*), Jaguar (*Pantera onca*), and Capuchin Monkey (*Cebus albifrons*), as well as unexploited stands of valuable timber species, including Chanul (*Humiriastrum procerum*) and Sande (*Brosimum utile*).

ECOLOGICAL VALUE: The Chocó is among the richest lowland systems in the world (Dinerstein *et al.* 1995). The Chocó Endemic Bird Area (EBA) supports the largest number of restricted-range birds of any EBA in the Americas (Stattersfield *et al.* 1998), and the Chocó as a whole has been recognized as a high priority region in WWF's Global 200 analysis (WWF 1997), and is a key part of one of CI's Biodiversity Hotspots (Myers *et al.* 2000). The proposed reserve area contains some of the last remnants of intact lowland Chocó forest. This is especially important given that the border of the RECC is located at the foot of the Andes and therefore contains little lowland forest, making expansion to this habitat type especially critical. Maintaining intact forest in the reserve will also help to protect important ecosystem services, including clean water and habitat for a range of aquatic species that provide the major protein source for local communities.

CONSERVATION VALUE: Despite its importance, almost no Chocó lowland or foothill forest is protected in Ecuador's existing protected area system (Stattersfield *et al.* 1998; Sierra *et al.*

1999). The proposed reserve would directly increase the amount of this forest type under protection, function as a biological corridor to the RECC, and help increase the effectiveness of the RECC itself through improved buffer zone management. The reserve would therefore greatly increase the chance that populations of endangered species dependant on Chocó forests can be maintained. Active reserve management, the creation of strict protection zones, and strong monitoring and evaluation efforts will also help to promote species conservation and enable strategies to be adjusted if necessary.

An important innovation is the planned use of incentive agreements to support the creation of conservation areas in Indigenous territories. This approach has the potential to allow conservation to become economically viable (and therefore feasible) to communities that have a practical need to reconcile development and conservation objectives in a context where market access for green products is very poor, and market conditions do not favor conservation-friendly development. Further, engaging Indigenous communities in reserve creation via incentive agreements offers an opportunity to undertake capacity building activities necessary for promoting broader land-use planning and effective territorial management.

A successful project could therefore catalyze the creation of many new and effective Indigenous protected areas in the region by providing a demonstration of the potential for conservation to provide economic benefits and a more benign path to development. In recognition of this possibility, the Critical Ecosystem Partnership Fund (CEPF) has already allocated significant funding for a local NGO, EcoCiencia, to investigate the potential to expand the reserve system proposed here. The present project is therefore best seen as a critical first step in creating, in the medium term, a shield along the entire northwest border of Cotacachi Cayapas (Map 3), which would make an important contribution to the conservation of numerous endangered species.

The project could also give the Ecuadorian Government an incentive to expand Cotacachi Cayapas into the approximately 2,000 ha of unallocated land between its borders and the communities (Map 3) (also to be explored with CEPF funding), as the declaration of a community reserve would allow such an expansion to consolidate a large, contiguous block of forest for conservation.

Finally, as a direct collaboration between an international development agency (the GTZ) and a conservation organization, the project could establish an important precedent for the joint implementation of functional conservation and development projects in contexts where both objectives must be promoted together.

3. Project Priority:

IMMEDIATE THREATS: Eighty percent of Ecuador's timber is produced in the Chocó, and most community members are currently engaged to some degree in small-scale logging. While impacts so far have been limited by available capital and technology, continuing exploitation has the potential to begin to cause serious damage to community forests. Far more threatening is presence of large timber companies in the region. With significant installed processing capacity and steady depletion of accessible timber elsewhere, mechanized exploitation is highly destructive, often completely devastating forest structure. Timber companies currently transport

heavy machinery by river, but logging roads are likely to reach the communities in the next several years, bringing a serious increase in pressure. Two communities (Capuli y el Encanto) have already signed contracts for exploitation in parts of their territories (Map 5), although in the former case, MFC-E is providing legal and technical assistance to ensure that logging will only take place under strict limits and FSC certification. In the latter case, an initial concession of only 200 hectares was granted, but the community is actively considering other areas for exploitation.

In the slightly more distant future (perhaps 5 years), communities will also face major pressures for forest conversion to oil palm plantations. The Chocó has seen widespread clear cutting for oil palm since the early 1990s, and the activity continues to expand rapidly. Destructive fishing and to a lesser degree hunting are also threats, although little of these activities take place in the reserve. Hunting is perhaps more easily addressed, as Chachi communities dedicate far more time to fishing.

The project will address these threats by helping to provide communities with an economically viable alternative to destructive resource use, helping to build their capacity to manage their territories for conservation objectives, and creating a clear link between economic benefit and conservation.

LONG-TERM THREATS: The threats described above will worsen quickly in the coming years. Since the beginning of the 1990s, Ecuador has been promoting the production of primary goods such as wood, palm oil and shrimp for external markets. At the same time, increasing poverty has led to increased colonization pressures as many poor families seek new sources of arable land and natural resources. These trends have had some of their most serious effects in the Chocó, where large areas have been cleared or degraded during the past decade, and Indigenous lands have been invaded on a number of occasions.

In the next decade, these pressures will reach the communities in full force, with road access likely, planned installation of facilities to process wood pulp permitting the exploitation of a wider range of timber species, and surrounding communities, having degraded their own resources, increasing looking to their neighbors for new sources of timber, fish and game. In this context, habitat and species that are not actively protected are likely to be destroyed.

To address these threats, the project will rely on the same strategy outlined in the section above, relying on the generation of benefits from protection, combined with active reserve management to support effective conservation. Long-term presence in the communities will also be central to providing support in dealing with ever-changing threats. Further, the existence of a potentially permanent source of development funding from conservation will help permit communities to adopt a long-term perspective about resource uses, both in the reserve and in the rest of their territories.

OPPORTUNITY ASSESSMENT: These interventions are especially timely given current threats and the potential for communities to enter immediately into contracts with major timber companies. Further, the imminent arrival of increased pressures will require far more active management to ensure conservation. In the absence of the project, it is unlikely that communities would have either the interest or ability to create and manage conservation areas. On the other hand, the long-term commitment of the MFC-E and CI to on-the-ground projects in the region, the project's innovative strategy, and its biological and cultural significance make it an important opportunity to protect a highly valuable area in a context where concrete outcomes have been difficult to achieve.

4. Project Objective/Strategy:

Traditional parks and reserves are likely to be insufficient to conserve the Chocó's biodiversity, as the majority of intact forest is legally titled to Indigenous and Afro-Ecuadorian communities (including an estimated 80% of all land in the Chocó-Manabi Corridor). While these communities are generally supportive of conservation and have an interest in maintaining traditional activities that require relatively intact ecosystems, they also have an increasing interest in generating income to acquire a range of market goods, as well as a practical requirement to meet subsistence needs. As evidence of the priority that communities place on development, in territorial planning activities facilitated in the 1990s by the USAID funded SUBIR project and MFC-E, communities in the region created conservation areas that were generally small, unconnected, and almost completely unmanaged.

In this situation, and given the threats described above, development and conservation must be reconciled if communities are to create and manage significant conservation areas. To meet these objectives, the project will use incentive agreements to facilitate community creation and support of larger and better-designed reserves. Incentive agreements would provide direct payments and technical assistance to communities in exchange for placing a portion of their territories under conservation status. This approach has the potential to avoid some of the limitations of projects seeking to generate incentives for conservation from sustainable use, including dependence on unreliable markets for green products from remote locations, and tenuous links between biodiversity protection and income generation. Permanent protection would be supported by the creation of an endowed funding mechanism

PROTECTED AREA OBJECTIVE: Following the process described below for designing an incentive agreement, starting in February 2004, the communities and the project team jointly designed the following Reserve, which would be created and managed in exchange for annual compensation:

Location: See Maps 1 & 2, connecting to the Northwest border of Cotacachi-Cayapas

Size: 19,235 ha (6,920 ha under strict protection)

Zoning: The reserve is composed of a core zone and several supporting zones:

Strict Protection Zone: hunting, logging, fishing, clearing are prohibited; tourism, biological studies and limited plant collection are permitted.

Sustainable Use Zone (Corriente Grande): Foregoing resource use in this zone (500 meters on either side of the Chimbagal river) was judged to be impossible because of the area's importance as a community resource. Activities aimed at promoting sustainable use and certification will be focused here, and all uses must be legal (e.g. timber harvest according to legal limits) and non-destructive (e.g. no dynamite fishing, no mechanized logging). During initial implementation, more explicit rules, as well as reductions in the size and use of this zone will be explored.

Buffer Zone: The purpose of this zone is to protect the reserve core from becoming an island surrounded by heavy pressure. Roads and logging machinery are prohibited, with other uses permitted. Compensation will support productive land uses to draw pressure away from this zone, as well as activities aimed at promoting sustainable use.

Compensation: \$5/hectare/year based on the number of hectares under strict protection.

The use of compensation payments will be based on community development plans generated by the assemblies and the project team. After approval by an oversight committee, funds will be spent by the community with project team guidance. Spending will also be subject to careful financial tracking by communities themselves, the project team, and periodic external audits. The use of compensation payments must support activities that benefit the community (e.g. a medical center, education, chicken farming), that are legal, that do not threaten sustainable development or human health, that include marginalized groups such as women, and that are likely to be economically viable in the region. A minimum amount must be spent on education and active reserve management. Rules will be refined during initial implementation.

Additional incentive agreement and reserve management activities: Monitoring and evaluation activities, personnel to support the incentive agreement, and community reserve guard salaries (but not other reserve management costs), will be necessary in addition to compensation payments to create a functional reserve. After initial implementation, total annual cost, including compensation, will total an estimated \$14/ha/year, although per ha costs may be reduced somewhat if the reserve is expanded (e.g. Map 3).

TECHNICAL APPROACH - STEPS TAKEN TO DATE TO DESIGN THE RESERVE (GCF/GTZ/CI CO-FINANCED) (SEE ANNEX 2 – PHOTOGRAPHS FROM RESERVE DESIGN)

1. *Initial discussions with communities on incentive agreements.* Discussions also covered characteristics that would make a reserve fundable, including sufficient size, connectivity, and little or no permitted use (Feb-May 04).
2. *Community decisions on reserve location, and preliminary delimitation of proposed reserve boundaries in the field* (May-June 04).
3. *Community decisions on reserve use regulations* (July 04).
4. *Socio-economic analysis*, including a formal study, work with assemblies to define the principal needs of each community, estimation of the cost of meeting these needs, and calculation of potential profits from logging and other resource uses (May-August 04).
5. *Estimation of appropriate compensation, based on the need to be competitive, generate tangible benefits to the communities, and be fundable.* The opportunity cost of foregoing timber extraction is currently ~\$2.50/year. In recognition of other foregone forest uses such as hunting, the need to discount conservation payments to compete with more immediate benefits from destructive resource uses, and the likely increase in opportunity cost in coming years, \$5 was selected as an appropriate price (August 04).
6. *Legal work to ensure that all land titles are legal and current* (August 04).
7. *Design workshop*, bringing together local and international experts to assess the proposed reserve and recommend additions and changes (August 04).
8. *Final community approval of the proposed reserve.* Based on recommendations from the design workshop, several changes were negotiated, including the creation of 3 kilometer-wide buffer zones, and the widening of the reserve's width along the west border of Corriente Grande. Possibilities for eliminating/reducing the use zone in Corriente Grande were discussed and rejected given the economic importance of continuing resource use in the area (September 04).

TECHNICAL APPROACH – NECESSARY STEPS FOR INITIAL 2-YEAR IMPLEMENTATION

1. *Management protocol development:* Various protocols need to be refined to ensure effective reserve management and a transparent, functional incentive agreement. These include a) reserve management plan, b) precise rules for infractions, c) methodology for planning the use of compensation funds, d) biological monitoring protocols, and e) options for permanent protection. Development of these protocols will require both short-term consultancies and consultations with experts. *Estimated cost: \$15,570. GCF funding request: \$0.*
2. *Compensation payments:* With 6,920 ha of strict reserve, and compensation of \$5/year/ha under strict protection, total annual compensation is estimated at \$34,600. “Bridge period” (see *Project Timing*, below) compensation will total \$3,150. Precise boundary demarcation

during initial implementation could result in minor changes to the amount of compensation payments. *Estimated cost: \$72,350. GCF request: \$42,850.*

3. *Reserve management:* Active reserve management will initially include two guards per community, although this number may change as management strategies are refined. Guards will be primarily responsible for addressing threats and assisting in biological monitoring. Initial implementation of management will also include guard training and official certification of guards by the Ministry of Environment, as well as community-led boundary demarcation. *Estimated cost: \$28,210. GCF request: \$18,610.*
4. *Supporting the incentive agreement:* Significant staff presence in the communities is necessary for the incentive agreement to function. Activities include assistance with reserve management, building community institutional capacity, ensuring that compensation is spent efficiently, and reinforcing the link between the reserve and development benefits. Staff time will also be necessary to raise funds, coordinate with a range of partners, guide and oversee planning and monitoring activities, and prepare and coordinate reports. These roles will be primarily filled by a project coordinator and a community technical assistant in each community. However, in the first year, a specialist will also be present in Corriente Grande, given that the community's reserve covers a significant portion of their territory and therefore represents a significant shift in the local economy, and also given the critical role that the community plays in the reserve. *Estimated cost: 68,120. GCF request: 20,020.*
5. *Monitoring and Evaluation:* Monitoring and evaluation strategies are described below. Expenses include annual classification and change detection of aerial photography, and a full-time field biologist working with community guards. *Estimated cost: \$36,540. GCF request: \$24,540.*
6. *Field logistics:* Expenses necessary for fieldwork with communities include gasoline, boat drivers, river taxis, and food. Expenses also include two days per month in the community of Sabalito to assist in the rapid creation of a reserve there. *Estimated cost: \$25,041. GCF request: \$11,558.*
7. *Expert oversight/assistance:* A group of experts from GTZ and CI will jointly make broad strategy decisions, as well as provide periodic supervision in the field and assist with fundraising. *Estimated cost: \$43,223. GCF request \$13,210.*
8. *Office expenses/overhead:* These include the purchase of a laptop computer, field office rental, map printing, telephone, etc. *Estimated cost: \$16,000. GCF request: \$8,600.*
9. *Unplanned needs: Estimated cost \$ 13,843. GCF request: \$ 8,843.*

PROJECT TIMING AND WORK PLAN: Project implementation will be divided into two phases, initial implementation, and permanent reserve creation. The present proposal covers initial implementation. Community engagement during the "bridge period" prior to initial implementation is also fundamental. Activities prioritized for the bridge period are precise

reserve boundary demarcation and a trial compensation payment of \$1,000 per community. The cost of these activities will be covered by the GTZ.

Initial implementation: In this period, lasting 2 years, the reserve will be created under community laws and a legal contract. This period will give the communities time to consider whether creating a permanent reserve is desirable, and give donors a chance to evaluate community commitment to long-term protection. The period will also allow upfront investments and adjustments to be made prior to a permanent agreement.

Permanent reserve creation: If both parties are satisfied, the communities will give the reserve permanent legal status under Ecuadorian law, as a permanent reserve on their lands. To provide further long-term security, during the trial period, a range of guarantee mechanisms will also be investigated, including a financial repayment clause. To support a permanent agreement, funds for an endowed fund will be sought.

Workplan diagram: Please see the attached Excel spreadsheet.

TECHNICAL APPROACH – IMPLEMENTATION CAPACITY: The project proponents have significant experience with the activities proposed here, as well as with Chachi communities

MFC-E has been working in the Chocó for several years, and the MFC-E's project coordinator, Christian Terán, has been working with Chachi communities for almost a decade. Past and present projects include assistance with zoning, sustainable forest management, agricultural production, commercialization of organic agricultural products, organizational capacity development, and resolution of conflict with loggers. Project staff have also collaborated with a wide range of local institutions, which will be contracted to provide specific technical expertise as necessary.

The Conservation Economics Program at CI brings experience from around the world in the design and management of protected areas and incentive agreements. CI-Ecuador has many years of experience with conservation in the region, and contributes both technical knowledge and strong relationships with donors and relevant political actors.

STAKEHOLDER INTERESTS: As noted above, communities have been involved in a participatory process leading to their proposal of the Reserve, and there is broad local support. The Chachi Federation (FECCHE), has also been informed of the project and supports it. NGOs currently working in the region have helped to refine the project design, including how it will relate to conservation projects using different strategies. Similarly, NGOs involved in past conservation efforts in the region, most notably under SUBIR (e.g., EcoCiencia and Ecolex), are interested in the project and have provided a range of useful suggestions. Finally, a number of donors have been consulted and kept aware of the project, and several have given initial indications of potential financial support, most notably USAID.

Initial implementation will be led by MFC-E in the field, with CI and MFC-E jointly making strategic decisions. Other local experts and NGOs will be involved in specific activities, both informally and as consultants. We also plan to increasingly involve the FECCHE, surrounding

communities, and local governments, in order to increase local acceptance of the reserve, support the communities' ability to manage it effectively, and validate as broadly as possible the use of incentive agreements as an appropriate conservation approach in the region.

5. Project Viability

The project seeks to create a community reserve via legal commitment coupled with the provision of benefits conditional on effective reserve management. As such, we believe it has significant potential to result in concrete, long-term protection in a difficult context. To ensure sustainability, the project will seek to raise funds for an endowment. The endowment would enable permanent protection via on-going support for active management, as well as permanent provision of development benefits linked to conservation.

IMPLEMENTATION RISKS: As a project attempting to convince Indigenous communities with relatively small territories to create and manage significant reserves in a context of serious and increasing threats, the project has a number of potential risks, although to some degree many of these may be considered common to conservation projects in highly threatened areas. To some degree too, these risks make the project a true test of the incentive agreement mechanism, one which, if successful, could lead to support from a far wider group of donors, and ability to protect other threatened species where traditional PAs are not feasible. The most important risks are:

Cost: Permanent protection is estimated to cost approximately \$275/ha, based on the creation of an endowed fund at 5% real interest. While per ha costs would be somewhat reduced by the expansion presented in Map 3, costs of this magnitude may still be challenging to fund, especially given other priorities such as ensuring funding for effective protected area management.

In this context, it is important to note that one-time costs of \$275/ha are well within the range of published estimates for protection in hotspot areas. For example, estimates from Defying Nature's End suggest an average one-time cost of \$265/ha in the hotspots (Pimm et al. 2001 supplementary data). CI's estimates prepared for the World Parks Congress (Bruner et al. *In press*) suggest an average one-time cost for expanding protection to the highest priority areas the developing countries of \$368/ha. Data published by James et al. (1999) suggest that in Latin America, land purchase plus a trust fund for management might average \$130/ha (author's calculations). Taking into account that low costs in the Amazon greatly reduce the average, the costs of the present project, in a biologically critical and highly threatened part of the Chocó, remain favorable. This final point is emphasized by a regional comparison: the creation of the Awacachi corridor, supported in part by the GCF, originally purchased land in the Chocó for \$150-\$200/ha, and is now paying between \$300-400/ha. For a per ha price at the low end of the purchase-only cost in Awacachi, the Gran Reserva Chachi would create a legal protected area, promote ongoing good relations with communities via compensation, and ensure active management.

Timid culture and little community institutional structure: Community capacity to address growing threats is hindered by a relatively timid culture and fear of conflicts, by low educational

levels, and by a lack of strong institutions, making proactive planning and action a challenge. Project activities therefore include significant presence in the communities to assist in the formation and strengthening of functional institutions, jointly develop management plans that will function in the particular community context, and ensure that reserves are seen as an important source of benefits. Experience from past projects in the region suggest that on-going presence is also seen as valuable by the communities themselves and will be fundamental to long-term effectiveness.

Need for reserve expansion: Given the current form and size of the reserve, it will be important to create reserves in adjoining communities, perhaps most immediately in Sabalito. While it is possible that adjoining communities will not be interested in Reserve creation, informal discussions suggest that the proposed mechanism will be seen as desirable. Initial planning activities in Sabalito were conducted during the reserve design process described earlier, and though progress has been somewhat slow, the community is interested in moving forward. EcoCiencia, a partner NGO, is also already planning to explore expansion to other communities.

Long term protection: Even after the Reserve is permanently created, a risk remains that communities could eliminate it. To some degree, this risk is common to conservation projects with communities, and we believe that over time, the stability and clarity of assistance directly related to conservation will make the reserve a source of value that will not be quickly discarded. Possible options to reinforce legal designation will also be investigated during initial implementation. Nonetheless, in a worst-case scenario in which communities eliminate the reserve and legal action is required, there would be a significant political risk of being seen as having unfairly committed Indigenous communities to conservation. While again, this risk is common to permanent conservation agreements with communities, it is nonetheless important. The strategy for addressing it will include ensuring that communities have a significant period of time to discuss and consider the seriousness of the commitment (the initial implementation period), seeking broad validation of the agreement from a range of groups, including the Chachi Federation, permanent presence in the communities to reduce the likelihood of interest in eliminating the reserve, and careful documentation of socio-economic benefits to resulting from reserve creation.

SOCIAL CONSIDERATIONS: The communities will receive significant benefits from the reserve given that the compensation is competitive and will be accompanied by assistance in spending. Further, by enabling communities to benefit economically from conservation, the project will in effect create a new marketable product, helping communities to both increase and diversify sources of income. The preservation of ecological services such as clean water, sustainable timber, and game will also help to protect important traditional productive activities. Finally, an incentive agreement can avoid much of the social disruption common to extractive economic activities in Indigenous territories.

6. Project Sustainability:

LONG-TERM MANAGEMENT: From its outset, the project will work to create the foundations necessary for long-term effectiveness. These include strengthening community institutions, building reserve management capacity, and creating and reinforcing a link between conservation

and development. Equally important will be to reinforce the value of long-term development benefits as opposed to short-term earnings from unsustainable resource extraction. Activities will also include fund-raising, as well as evaluation of possible institutions for managing long-term funding. One possibility for the latter is Ecuador's existing National Environmental Fund (FAN). The foundation for long-term on-the-ground presence is also in place in the form of the GTZ/MFC-E's long-term commitment to sustainable management of natural resources in the region. By seeking the creation of an endowed fund, the project will be able to support necessary activities in perpetuity.

MONITORING AND EVALUATION: Detailed monitoring is necessary for both effective reserve management and an effective incentive agreement. Evaluation of compliance with the terms of the incentive agreement will cover both conservation commitments and those related to the use of compensation funds.

Conservation effectiveness: Conservation effectiveness will be monitored from three perspectives. First, annual aerial photographs (1 meter resolution) will be used to verify that there is no land clearing or logging within the reserve. Second, a full-time biologist will conduct biological monitoring of a suite of species (particularly game species and endangered species), to help ensure that there is no hunting. The biologist will work directly with community guards in the implementation of monitoring protocols. Third, given the limitations of using transect data to judge compliance with the incentive agreement, biological monitoring will be supplemented by direct monitoring of community activities, with the project biologist spending time with families living near the reserve, and the project coordinator working with families around the community centers. Presence in the communities will also help the project to adjust management strategies if threats beyond the control of the communities (e.g. land invasions) threaten the reserve.

Socio-economic and financial compliance: Ensuring that funds are spent transparently, to the benefit of the community, and according to the rules specified will also be necessary to ensuring that the benefit side of the agreement is functional.

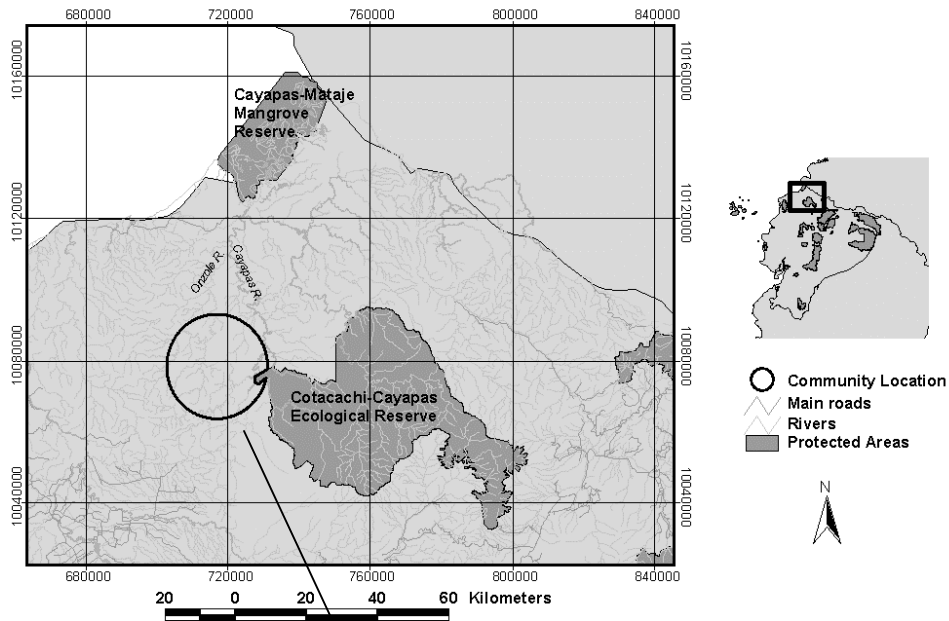
Implementation: The first step in implementing these monitoring protocols will be generation of baselines and selection of specific indicators and tolerances for monitoring. Specific responses to a breach of the incentive agreement will be developed during the first year of implementation, but in general terms, compensation will be reduced at increasing levels according to number and severity of infractions, and reinstated after a period of time and after the community demonstrates that steps have been taken to avoid future infractions. Both biological and socio-economic evaluations will be used to improve the design of the incentive agreement.

7. Project Budget:

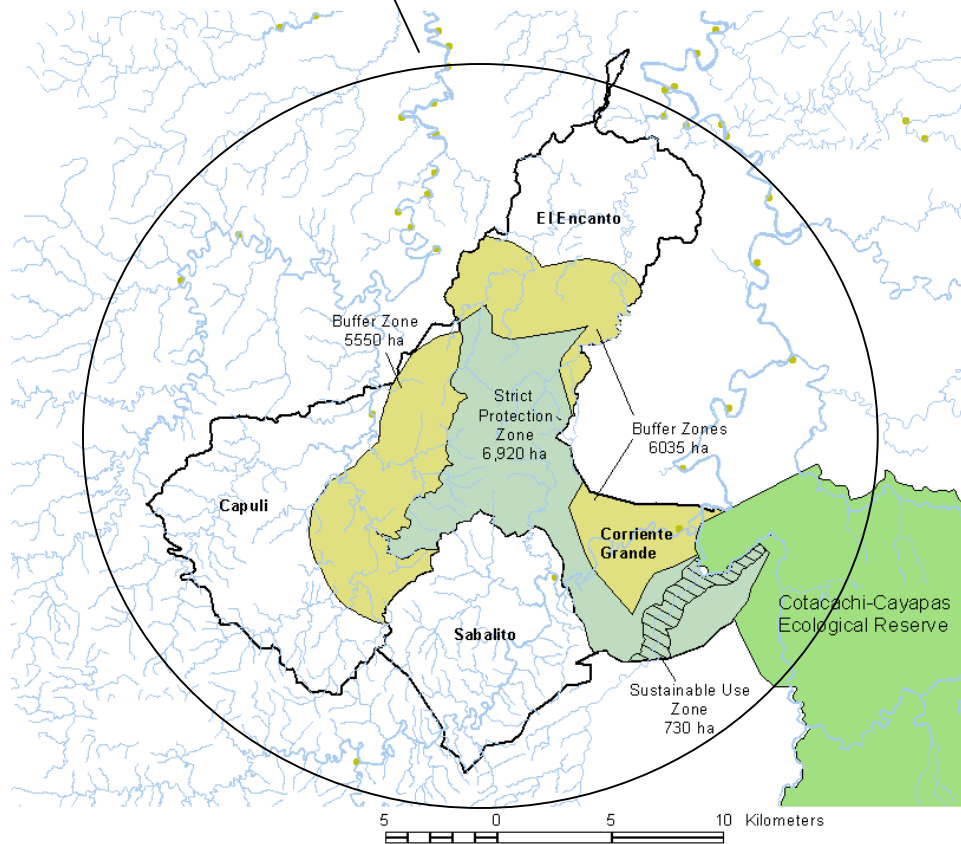
Please see the attached Excel spreadsheet. Costs are presented first by Activity (as above under *Technical Approach*), then by Category. The majority of matching funds are from the GTZ (\$111,903), with additional contributions from CI's Center for Biodiversity Conservation-Andes (\$20,000), CEPF (\$20,000), and in kind support from CI-CABS and CI-Ecuador (\$18,763). Additional donors who have been approached include USAID and KFW. These donors are more likely to support long-term financing and will be involved actively in initial implementation.

ANNEX 1: Maps

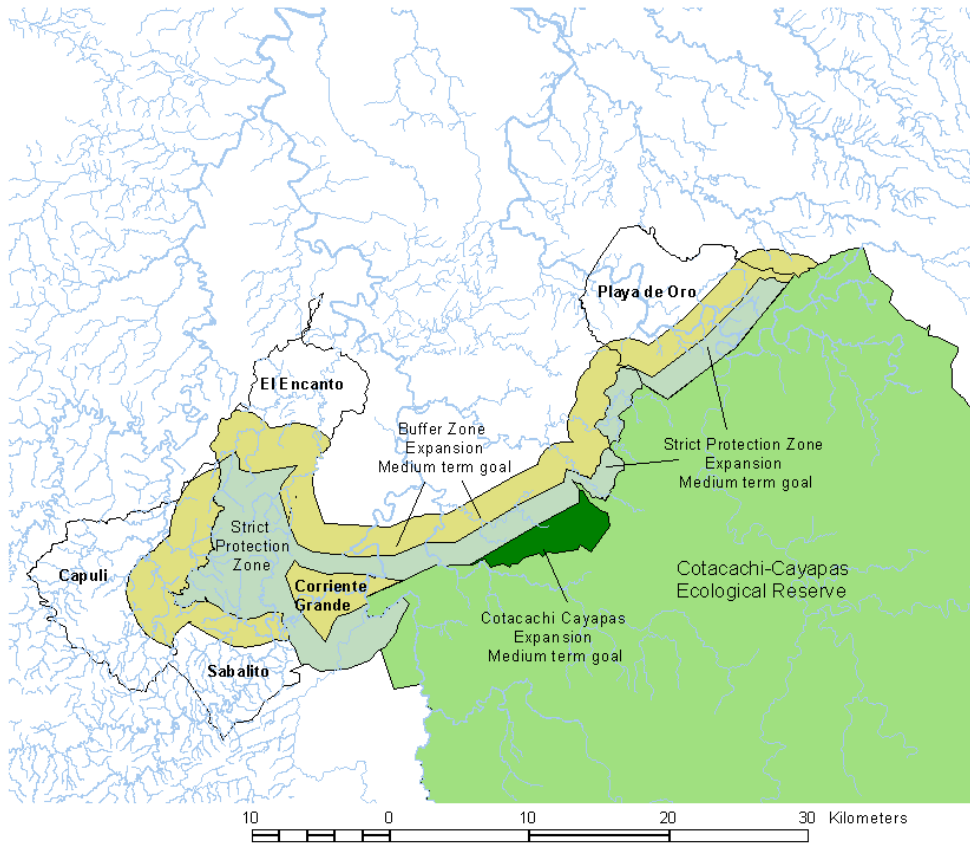
Map 1: Project Location



Map 2: Reserve design



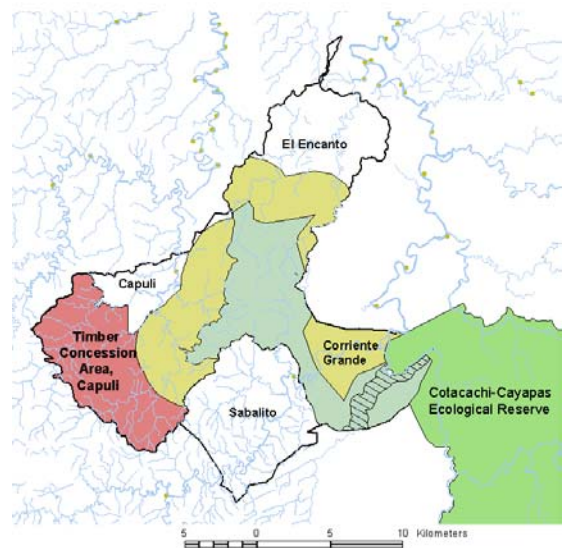
Map 3: Medium-term expected outcome



Map 4: 2001 Expansion of Cotacachi Cayapas



Map 5: Timber concession area, Capuli



ANNEX 2: Photographs from reserve design activities.



Initial workshop, Sabalito



Community of Corriente Grande



Reserve demarcation – taking GPS points



Reserve demarcation team, El Encanto



Discussing reserve buffer zone creation, Capuli



Final approval of the reserve in assembly, Capuli

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