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THE POLITICS OF PARTICIPATION IN A BIODIVERSITY CONSERVATION PROJECT: ANALYSIS OF A BIOLOGICAL CORRIDOR PROJECT IN OSA PENINSULA, COSTA RICA

By

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ABSTRACT

THE POLITICS OF PARTICIPATION IN A BIODIVERSITY CONSERVATION PROJECT: ANALYSIS OF A BIOLOGICAL CORRIDOR IN OSA PENINSULA, COSTA RICA

By

Alicia Jimenez-Elizondo

The Osa Peninsula, Costa Rica, is a land of contrasts. It has incredible biodiversity richness but suffers high levels of poverty and lacks development options. Like many other places in Central America, the Osa Peninsula confronts a "conservation dilemma": how to provide socioeconomic benefits to the area residents while protecting the area's biodiversity richness. The Osa Biological Corridor Project (Osa BC) is part of the Mesoamerican Biological Corridor (MBC), which is an effort to unify Central America's conservation actions. These projects can be categorized as an Integrated Conservation and Development Project (ICDP). The efforts to protect biodiversity and enhance development are widely debated. In response, some believe that enabling civil society participation for decision-making will help to resolve these challenges. Using a case study approach, this thesis analyzes the Osa BC strategy and its participatory approach. The thesis identifies obstacles ICDPs face in achieving meaningful participation, and offers some recommendations.

This study is dedicated to Papi, Mami, Jorge, Nadia, Geo, Emmanuel, Felipe and Ana Laura. Without their support I would not have been able to make it this far.

Los quiero mucho.

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I am very grateful with my classmates and friends, which in different ways helped me during the writing process. I would like to thank my family that from a distance supported me and gave me strength when I really needed. And, most of all, I would like to thank God that has been with me all this time, helping me to achieve what for me seemed impossible.

TABLE OF CONTENTS

LIST OF FIGURES

ABBREVIATIONS

ACOSA Osa Conservation Area
BOSCOSA Osa Peninsula Forest Conservation and Management Project
CBD Convention on Biological Diversity
CCAD Central American Commission on Environment and Development
CEDARENA Environmental and Natural Resources Law Center
CEPF Critical Ecosystem Partnership Fund
CNP Corcovado National Park
COVIRENAS Natural Resources Protection Committees
FICOSA Osa Conservation Trust
FONAFIFO National Forestry Fund
GDFR Golfo Dulce Forest Reserve
GEF United Nations Global Environmental Facility
ICDP Integrated Conservation and Development Projects
IDA Institute of Agrarian Development
IMF International Monetary Fund
INBio National Biodiversity Institute
ITCO Institute of Land and Colonization
IUCN World Conservation Union
MBC Mesoamerican Biological Corridor
MINAE Environment and Energy Ministry
NGO Non Governmental Organization
OPF Osa Productos Forestales Company
Osa BC Corcovado – Piedras Blancas Biological Corridor
OTS Organization for Tropical Studies
PES Payment for Environmental Services
SINAC National System of Conservation Areas
SIPRAICO Farm Workers Union of the Osa Peninsula
TNC The Nature Conservancy
TSC Tropical Science Center
UNDP United Nations Development Program
UNESCO
WCPA World Commission on Protected Areas
WWF World Wildlife Fund

CHAPTER 1: THE POLICY CONTEXT FOR CONSERVATION AND DEVELOPMENT PROJECTS IN COSTA RICA

Introduction

Alongside their high biodiversity richness, Mesoamerica countries suffer high levels of poverty, social inequality, economic underdevelopment and environmental decline. The main pressures on the environment and natural resources are the rising population, increasing inequality of incomes, limited planning especially in urban areas, and high dependence of many economies on natural resources exploitation. Currently, almost half the population remains below the poverty line and many lack access to basic healthcare, education and clean water. Ineffective law enforcement and strong incentives favoring extraction and forest conversion also affect the implementation of conservation actions. In addition to those social problems, by the mid 1990s, the region was losing an estimated 2.1 percent of its forests every year—one of the highest rates in the world (FAO 1999); similar habitat losses have occurred in other ecosystems.

The Osa Peninsula, located in the South Pacific coast of Costa Rica, exemplifies the above situation. On one hand, it is a land with incredible biodiversity richness. It has been considered as one of the most important elements of the southern region of Mesoamerica, therefore, a wide range of conservation organizations (national and international) are very interested in promoting conservation actions that protect this invaluable resource. On the

other hand, the Osa Peninsula suffers high levels of poverty and a lack of development options. Government development policies and foreign interventions have affected local people's opportunities to benefit from the region's natural resources and make a sustainable living. This has created tensions and conflictive relations among residents, the government and environmental NGOs. Local people are especially critical of NGOs, arguing that these organizations are getting funds to protect nature while Osa residents do not benefit from the outcomes. Despite the hostility, NGOs and the government continue to pursue conservation actions. One important project includes the Osa Biological Corridor, which is part of a larger conservation and sustainable development initiative, the Mesoamerican Biological Corridor. These projects are closely related; they work in different land use types, promoting conservation and restoration of degraded habitats and ecosystems. They also intend to build partnerships among different stakeholders in each of the land use types to enhance achievement of conservation goals. But the Mesoamerican Biological Corridor has a broader agenda; it is part of Central America's integration process, which together with efforts to foster democratic governments, economic revitalization, privatization and decentralization, is trying to build the sustainable development model in the region.

Both projects assure that they will provide socioeconomic benefits to the area residents who are bearing the conservation costs; but they also will help in the protection of the area's biodiversity richness. These projects adopt the

sustainable development model that involves efforts to foster democracy and decentralization among other modernization reforms (Miller, Chang et al. 2001).

Because of its broad agenda, and all the obstacles to deal with social issues in Mesoamerican and Osa Peninsula context, there is a great debate between conservationists, participatory developers and locals about the successful implementation of the MBC (and also the Osa BC). Despite the debates and different interests, several authors (Miller, Chang et al. 2001; Solís, Madrigal et al. 2002) believe that successful implementation is possible if the project addresses some strategic challenges such as: reconciling stakeholder interests; fostering democratic governance and enabling civil society participation and catalyzing information for participatory decision-making (Miller, Chang et al. 2001; CCAD 2002).

Problem Statement

Because of their objectives and strategy, the MBC and the Osa BC are framed as integrated conservation and development projects (ICDPs). ICDPs have been highly criticized in recent years for failing to achieve biodiversity conservation and promoting sustainable development at the same time. The main criticism is that it is not possible for conservation actions to solve problems of poverty and development, especially in third world countries. Moreover, the complexity of these projects often prevents them from achieving their goals.

MBC planners have acknowledged the difficulties in dealing with the big picture, even though past experience shows that more integrated and holistic strategies are needed to protect nature sustainably. The idea of biological

corridors is not widely known and accepted. Due to its complex approach, it requires not only the acquiescence of key stakeholder groups, but also a sense of ownership, access to strategic information and a willingness to mobilize actively behind the initiative (CCAD 2002). Also planners must be able to negotiate and reconcile different stakeholders' interests and clarify proposed land use planning and what it entails for the people living within the corridors.

In order to deal with the above and other ICDPs challenges, several authors (Miller, Chang et al. 2001; Solís, Madrigal et al. 2002; Metrick 2001; Brown 2003; Campbell and Vainio-Matilla 2003; CCAD 2002) assert that it is crucial to open participation spaces where people can address their conflicts, voice their needs and concerns, get informed and be able to influence the decision-making process of the project. For Solis et al (2002), taking into account the Mesoamerican socio-cultural, spiritual and economic dynamics, it is almost mandatory for the implementation of biological corridors to have a clear commitment to finding ways in which decision-making can take into consideration the participation of diverse stakeholders.

Is the MBC and the Osa BC creating opportunities for different actors, including marginalized groups within the corridor, to participate in the decision-making and benefit from the biological corridors? What is the importance of incorporating local people in design, planning and implementation? Will participation by different stakeholders enhance the sustainability of the project?

Because of the large geographical scope of the MBC, and because it is only in the early implementation stages, this research focuses on one component of

the MBC, the Corcovado – Piedras Blancas Biological Corridor (henceforth Osa BC)[1].

The following specific research questions guide the analysis of this thesis:

1. What is the Osa biological corridor strategy to achieve biodiversity protection and promoting sustainable development in the area?
2. Who are involved in the Osa biological corridor project, what are their interests and reasons for their involvement?
3. What is the concept of participation that is promoted in the Osa biological corridor?
4. How are people participating in this project, what factors may prevent others to participate?
5. What are the implications of the MBC regional project on the Osa BC project implementation?

In order to analyze the above questions, this research use the case study approach, which strives to understand what can be learned from one single case. For developing this approach it is important to provide context information that allows the reader to follow up the analysis. For this reason, the following sections of Chapter 1 and all Chapter 2 are devoted to provide information on the regional, national and local context of the Osa Biological Corridor.

[1] These initiatives are interrelated and therefore I will keep making references of the MBC when analyzing the Osa BC implementation and participatory approach.

Costa Rica Biological Richness

As part of the Mesoamerican region, Costa Rica is considered globally as one of the countries with the highest levels of biodiversity[2]. In general, Mesoamerica harbors over seven percent of the world's biodiversity (WRI 2002). More specifically, Costa Rica, with only 0.03% of the global surface, harbors about 3.9% of the total number of living species on Earth (Kappelle, Castro et al. 2003).

In part, this biological diversity derives from the country's geographic position on the Central American Isthums that has served as a land bridge for biotic interchange between North and South America (see Figure 1). Other factors that have helped are its climatic variability and different zonal that have originated a great gamma of micro-habitats for an enormous number of organisms.

Costa Rica's biological richness was severely threatened from the1940s to 1990s when development policies promoted the conversion of natural forests to agricultural and pastures for exports. As a result, Costa Rica's forest cover was reduced from 80% to 30% of its territory. Marine resources are very threatened too, especially because of contamination coming from rivers that serve as the main waste disposals for urban areas.

Some of the reasons that cause environmental degradation in Costa Rica is the lack of enforcement of the country's environmental laws and public policies.

[2] A definition of biodiversity is: Variability among living organisms from all sources and the ecological complexes of which they are part, this includes diversity within species, between species and of ecosystems (CBD 1992).

Policies have been designed more in terms of control and short-term responses than prevention, education and participation.

Figure 1: Map of Costa Rica, and its place in the Americas

Conservation Policies and Laws

Nevertheless, Costa Rica is considered as a leader in developing a model for sustainability that supports biodiversity conservation. The Political Constitution guarantees the protection of natural beauty for cultural purposes (Article 89) and the right to "a healthy and ecologically balanced environment" (Article 50). To achieve these goals the State acknowledges the "precautionary"[3] and "the polluter pays" principles. These principles are the foundation of the most important environmental laws in Costa Rica.

The Organic Environmental Law encourages civil society participation in land use planning processes to determine the type of industries or projects to be

[3] This principle emphasizes preventive rather than reactive measures

allowed in specific areas. The Forestry Law establishes several regulations on land use for the management of forest resources. There is a specific legal frame for water protection and protection of forested areas adjacent to rivers, lagoons or lakes; not only to protect water resources but also to prevent natural disasters like floods.

Several key policy actions support these laws:

1. Almost 25% of the land is under various types of protected areas regulations.
2. A regional conservation areas system (SINAC) promotes an integral land use planning
3. A Ministry for the Environment elevates the importance of conservation
4. Enhanced national technical capacity to classify and monitor the country's biodiversity and identify potential uses.
5. New financing mechanisms to support conservation
6. Participation in Central America's conservation efforts through the establishment of biological corridors.

Below are presented more details about these policy actions.

1. Protected Areas

Costa Rica's protected areas system is the cornerstone for the design of conservation and development projects. This system was started in the early twentieth century; but it took until 1970's and the promulgation of the Forestry Law No 4465 for the protected areas to be established and a National Parks

Department to be created. This law represented a dramatic shift from previous forest clearing policies[4] (Nygren 2000).

There are in total 132 protected areas covering approximately 25% of the national territory (Pfaff and Sanchez-Azofeifa 2004). Most of these protected areas are managed following the protectionist paradigm of conservation, where people have been expropriated to create uninhabited reserves (Schwartzman, Moreira et al. 2000). External funding from a variety of governmental and non-governmental agencies has been fundamental to promote this protected areas system[5].

Before the 1990's, natural resources were considered by the law as forest resources. Two departments were in charge for forest protection and management: General Forestry Directorate and National Parks Service; both under the Ministry of Agriculture. In 1990, a third department, the Wildlife General Directorate, was established to incorporate wildlife as important for protection and management. With the promulgation of the Organic Environment Law in 1995 those three departments became the Ministry of Environment and Energy (MINAE).

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[4] The mission of Costa Rica's protected areas overlapped with IUCN conception of strictly protected areas, that meant stop the transformation of the land and everything on it to other uses (Brandon, 2004)

[5] Funding came from conservation organizations (World Wildlife Fund, The Nature Conservancy, Conservation International), bilateral assistance agencies (USA, Canada, Sweden, Denmark, Finland, Norway and the UK), and the Global Environmental Facility (GEF) of the World Bank. International agencies were very influential, and continue to lobby for the creation of protected areas (Campbell, 2003)

2. National System of Conservation Areas (SINAC)

In 1987, and in response of the challenge to incorporate local communities in protected areas management, the government established a conservation areas system. This system resembles the core-buffer zone model promoted by UNESCO's Man and the Biosphere program, with the old parks constituting the strictly protected core area and surrounding populated regions comprising a partially protected buffer zone where economic activities were both allowed and actively promoted (Steinberg 2001). A major impetus for the reform according to Steinberg (2001) was the protracted conflict surrounding Corcovado National Park, involving gold miners and the park agency. Conservationists in Costa Rica concluded that parks would survive only with greater efforts to involve local communities in order to deal with social conflicts on those areas.

Figure 2: Conservation areas in Costa Rica (ACOSA is circled)

SINAC includes eleven conservation areas (see figure 2). Each of them is clearly bounded and several serve as cornerstones for the conservation actions

in the area. The intention was to decentralize the decision-making for the protected areas' management, link the management with other land use in surrounding areas including local participation in the resource planning.

Every conservation area has different types of protected areas: national parks, biological reserves, protected zones, forest reserves, wildlife refuges, wetlands and natural monuments. Each category has specific regulations for its management; nonetheless for many protected areas in Costa Rica these regulations often are not enforced. The categories that are relevant for this thesis are national parks and forest reserves.

The main function of National parks is to protect flora, fauna and scenic beauty of national importance. In principle, these areas are state property. But until 1999 only 84% of the land was state owned, while the reminder was private or municipally owned. Except for tourism, almost no productive activity is allowed.

Forest reserves are forests that are especially suitable for logging. Until 1999, 24% of these areas were state owned and approximately 76% were still in private lands (CEDARENA, 2001). Even though the main purpose is timber production, this does not imply that reserve's resources can be exploited. On the contrary, reserve's regulations try to harmonize forest conservation and timber extraction. Those who want to log must comply with MINAE management regulations.

3. Ministry of Environment

The creation of a Ministry of Environment[6] during the 1980s elevated the importance of conservation policy in the development context of Costa Rica; and at a time when conservation was still a very low priority relative to other sectors like agriculture, mining, public works, etc in many other countries.

4. Biodiversity Inventory and Monitoring

In 1989 a presidential commission proposed the creation of the National Institute of Biodiversity, INBio, as a private, nonprofit, public interest association to coordinate taxonomic research on Costa Rica's biodiversity. INBio was granted several millions of dollars to undertake inventories, and they also sought to identify natural products of potential interest to the private sector, with the goal of generating new sources of funds for the park system and reducing its dependence on the vagaries of foreign donations. They have designed a novel approach to carry out taxonomic work, hiring people that are not biologists, and train them to scientifically identify different species, these people are parataxonomists. With a several-million-dollar budget, state-of-the-art laboratory equipment, educational programs and dozens of researchers that catalogue the country's natural richness (Steinberg 2001), the Institute has generated some controversy by signing contracts for biodiversity prospecting with a transnational corporation (Merck & Co). Costa Ricans, skeptical whether these contracts will

[6] Now called Ministerio de Ambiente y Energia (MINAE), assumed responsibility for the Energy and Mines office, the National Park Service and the General Forestry Directorate.

benefit the country, have been critical about 'selling the biodiversity richness to a company'[7].

5. Innovative Financing Mechanisms to Support Biodiversity Conservation

External factors outside the protected areas have affected the management of these areas in Costa Rica. For example, the economic crisis during the 1980's and the impact of IMF required the government to reduce its expenses and prevented the government from hiring more people; so the protected areas were left with few officials for their management.

In order to deal with this crisis, Costa Rica adopted two innovative mechanisms to finance management and conservation outside the protected areas: debt-for-nature swap and payments for environmental services.

Debt for Nature. The first mechanism, a debt-for-nature swap, allows environmental organizations to buy private commercial debt at discounted rates and retire the debt in exchange for promises of domestic conservation investments. During the late 1980's, when Costa Rica faced a harsh economic crisis with the highest per capita foreign debt of any developing country, Costa Rica's Environment Minister lobbied the international donor community to exchange debt-for-nature. Soon Costa Rica established itself as the "star performer" with this mechanism, receiving one third of the funds provided to fifteen countries during the early stages of the transfer mechanism.

[7] No products were found and Merck have not patented any medicines, therefore the controversy fade away.

Payment for Environmental Services. The second mechanism, the Payment for Environmental Services (PES system), is a modification of a system for reforestation and sustainable logging incentives that was in place during late 1980's and 1990's, when Costa Rica was suffering a very high deforestation rate. This system allowed timber companies to establish tree plantations and forest management by giving them tax reductions and direct payments. These incentives were highly criticized because they benefited the powerful corporations that were accelerating the deforestation process in Costa Rica.

Using the conceptualization of environmental services from the Convention of Biodiversity, Costa Rican government (through the Forest Law No.7575) reframed the timber incentive system to an environmental services payment system. The Forest Law acknowledged the following services: biodiversity protection, carbon sequestration, water protection and scenic beauty. PES system gives monetary payments to landowners who are willing to protect the forest on their lands, for the services their forest are providing and as a compensatory measure for the economic loss of not converting the forests on their land.

When the system started, the government expected to obtain the funding for this system through an international market for carbon sequestration service, which was expected to be in place because developed countries were going to be interested in buying those to fulfill the requirements regarding greenhouse gases reduction of the Climate Change Convention. Without US support for the Kyoto Protocol, it was not possible to establish an international market.

Therefore, the government decided to internalize the costs for protecting forests outside protected areas, so the main funding sources came from a gas sales tax. None of these funding sources are currently functioning. Government structural adjustment programs decided to reduce the gas tax sale. In order to continue with the system, the Central Government accepted a loan from the World Bank to have additional funds until other alternatives are found. This loan can be used only to pay conservation of natural forest. Several donations complement this fund.

The Environmental Ministry decides upon the priority areas to allocate the payments, and FONAFIFO (*Fondo Nacional de Financiamiento Forestal*, National Forestry Fund), a specialized institute that collects, manages and handles the payments, administers the system. Landowners sign a contract with FONAFIFO in order to receive the payments. There are three types of contracts: reforestation, sustainable forest management and forest preservation. The payment per hectare depends on the type of contract, the contracts for reforestation has higher payments, and last longer.

6. Biological Corridors in Costa Rica

In order to support the role of protected areas in protecting biodiversity, conservation biologists have proposed the creation of biological corridors, which promote the connectivity between two protected areas and enhance the mobility and genetic exchange of different life forms between areas. The Costa Rican government and different stakeholders have adopted the recommendations of a technical land use planning study (Estudio GRUAS) to propose sites for

biological corridors (CBM 2002) (Pfaff and Sanchez-Azofeifa 2004). So far, there are thirty-nine local biological corridor initiatives in Costa Rica; one of them is the Corcovado – Piedras Blancas Biological Corridor, the subject of this thesis.

The Mesoamerican Biological Corridor

Mesoamerica as a region has been declared as a biodiversity hotspot. Hotspots are regions that harbor a great diversity of endemic[8] species and, at the same time, have been significantly impacted and altered by human activities (Myers, Mittermeier et al. 2000). Plant diversity is the biological basis for hotspot designation. To qualify as a hotspot, a region must support 1,500 endemic plant species, and must have lost more than 70 percent of its original habitat. Typically, the diversity of endemic vertebrates in hotspot regions is also extraordinarily high. The hotspot concept targets regions where the threat is serious to a great number of species and allows conservationists to focus on cost-effective efforts on the area (Anon. 2004).

The Mesoamerica hotspot encompasses all subtropical and tropical ecosystems from central Mexico to the Panama Canal. This includes all of Guatemala, Belize, El Salvador, Honduras, Nicaragua, and Costa Rica, as well as 34 percent of Mexico and more than 60 percent of Panama. Mesoamerican forests are the third largest among the world's 25 hotspots and are critical for the preservation of the biodiversity of the Western Hemisphere. Their spectacular diversity includes jaguars, quetzals, howler monkeys, and 24,000 plant species.

[8] Endemic species are species that can only be found in specific geographical areas.

The region is a critical migration corridor for many bird species and the wintering grounds of the monarch butterfly.

Unifying Conservation Actions in Central America:

The Mesoamerican Biological Corridor is a result of a growing recognition of the need for an integrated strategy to deal with Mesoamerica's environmental problems. After the end of civil conflicts in the early 1990's, the Central American region made efforts toward economic and political integration. At the same time, international financial support increased to encourage the establishment of different types of protected areas. The legal and institutional frameworks governing environmental issues also changed significantly during this period. At the national level, governments established agencies to oversee environment and natural resources policy formation and administration. At the regional level, Central America's presidents signed an agreement in 1989 that established the Central American Commission on Environment and Development (CCAD). The CCAD embodies a unified vision for regional environmental cooperation within which the quality of life of Central Americans will be improved through rational use of natural resources, pollution control and the reversal of environmental degradation. The UN Conference on Environment and Development in 1992, the adoption of the Convention on Biological Diversity and the Framework Convention on Climate Change inspired Central American countries to reach a number of regional agreements for biodiversity conservation, protection of priority natural areas and forest management. In 1994, the Presidents of all Central American countries signed the Sustainable Development Alliance – a plan to

promote peace, consolidate democracy and protect the environment; one agreement of that Alliance was to promote the establishment of a biological corridors system to connect the main Central American protected areas.

Background for the Mesoamerican Biological Corridor Project

The project evolved from an initiative of a consortium of international conservation organizations called *Paseo Pantera* (Path of the Panther). This project sought to conserve biodiversity by linking protected areas from southern Mexico to Panama (Mesoamerica). This proposal was defined mostly in terms of biological outcomes, and it worried many local residents, especially indigenous groups, who feared expropriation of their ancestral lands and the expansion of protected areas onto their land.

By 1999, Paseo Pantera proposal was redefined to integrate social and economic components; it was renamed the Mesoamerican Biological Corridor (henceforth MBC). The MBC is an "umbrella project" for a number of individual local biological corridors projects all over Central America and Southern Mexico. (Metrick 2001) (See figure 3).

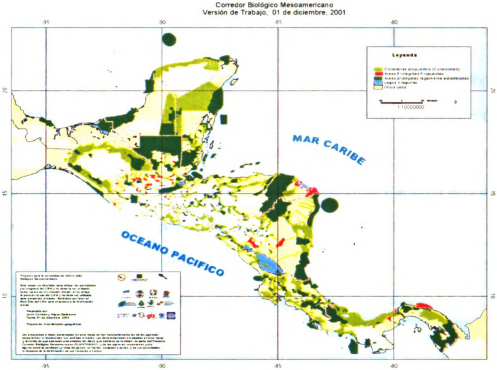

Figure 3: Proposed elements of the Mesoamerican Biological Corridor. (Color Code: Light green: Corridor Areas. Dark Green: protected Areas already established. Red: Proposed protected areas. Yellow: Other uses. Images in this thesis are presented in color) (Corrales, Ballestero. 2001)

The Mesoamerican Biological Corridor Concept and Objectives

The MBC is defined as: "A system of land use planning that features areas under various administrative arrangements including core natural areas, buffer zones, multiple use zones, and corridor areas. These are organized and consolidated in a manner that offers environmental benefits and services to Central America and the world. The MBC will provide opportunities for people to participate and promote investment in the conservation and sustainable use of natural resources. The purpose is to improve the quality of life of the Mesoamericans" (WRI, 2001). This project has been described as the largest

and most complex sustainable development project in recent years (Miller, Chang et al. 2001; Metrick 2001).

As conceived, the MBC will stretch from the southeast of Mexico along the Atlantic coast of Belize and Guatemala. It will continue down the Atlantic Coast of the isthmus and spread into the interiors of Honduras, Nicaragua and El Salvador. The Corridor will wind down the Atlantic coast of Panama and finish (for now) in the Choco region of Panaman and Colombia. (UNDP, GEF, 1999)

In 2001, it was decided that each country would handle the MBC project implementation (Solis, et al, 2001). Thus each country was allowed to submit different implementation proposals, consistent with its needs and socio-economic and political characteristics.

According to Zuñiga and Cardenal (2001), who are part of the regional management team of MBC, one of the main goals of this project is to provide technical assistance that allows the government and communities to jointly establish the MBC as a system that integrates, preserves and uses the biodiversity in the framework of the priorities of the sustained economic and social development of the region. It is seen as a tool in the fight against poverty and to reduce vulnerability to natural disasters. (Solis, et al, 2001)

The MBC action axes, as noted by Zuñiga and Cardenal (in Solis, et al, 2001), are: poverty alleviation, disaster mitigation, valuation of environmental services, cultural patrimony and traditional knowledge protection, strengthening institutional capacities, the Central American integration process, and define priority areas and exchange of experiences.

Miller et al (2001) assure that the MBC concept promises significant socioeconomic benefits to the people of the region. The strategy they see is that the forest network would protect large areas of forest capable of sequestering atmospheric carbon that could be sold in emerging international markets for carbon offsets. Also, the MBC network would help to protect water supplies by focusing on the protection of forests nearby water sources.

The Mesoamerican Biological Corridor Strategy

Miller et al (2001) mention that the MBC is a land-use scheme consisting of four proposed categories: core zones, buffer zones, corridor zones and multiple zones. Below is presented a short description of each category.

Core zones are the 'protected areas'. Their purpose is to ensure that the forests, wetlands, coral reefs and other wild habitat continue to maintain biodiversity and generate environmental services.

Buffer zones are the geographic areas surrounding protected areas. Their purpose is to create a physical space between protected areas that contain primarily wild lands, on the one hand, and adjacent areas that feature farms, harvested forests, and other human uses, on the other. These rings of land and water around the core zones are managed to filter or absorb negative impacts operating in either direction. For example, aerial spraying of pesticides on adjacent agricultural crops can affect biodiversity; conversely, wild animals may range out from the core zone to damage adjacent farms and crops. Thus, buffer zones serve as transitional areas. Miller et al (2001) mention that residents must

be offered a set of equitable incentives and regulations in order to promote changes in land use, while compensating for such costs as crop damage.

Corridor (or connectivity) zones purpose is to provide land or water pathways that link core zones with one another, allowing plants and animals to disperse and migrate and adapt to the pressures of changing climate and habitat conditions. Ideally, land use within corridor zones will be natural or 'restored'. In practice, the lands between Core Zones may already be subject to human use. In such cases, residents and land users will be encouraged to adopt management practices that create biodiversity-friendly environments while also providing for people's livelihood. Examples of biodiversity friendly activities are agro-forestry systems that feature perennial tree crops with annual crops or forage. Mixed crops, and organic and integrated pest management practices that eliminate or minimize use of chemical pesticides and herbicides. Also, on farm protection of natural forest patches and wetlands that protect pollinators and predators of insect pests, in addition to maintain water tables during the dry season.

Multiple-use zones purpose is to distinguish areas featuring wild lands from those devoted to agriculture, managed forestry and human settlement. These zones could be established within buffer and corridor zones to denote areas that will be dedicated to direct human occupation and use. But also this category can be applied to wider areas to encourage diversity in general land-use practices, and hence give residents incentives to adopt biodiversity-friendly land use practices.

The extent of each zone will vary depending on the social, economic, biological and institutional context that they are situated, but two variables that are important are the intensity of existing human use and settlement, and the size of wild lands.

The Mesoamerican Biological Corridor Implementation

The MBC has not officially started as a regional project. It is in a preparatory phase and it is expected to start during? 2005. The regional institution that is responsible for the MBC is the CCAD (Central American Commission of Environment and Development) (Metrick, 2001). With financial support from the United Nations Development Program's (UNDP) Global Environment Facility (GEF); and the German Technical Cooperation Agency (GTZ), in 1999 the CCAD launched a multi-million-dollar project: "Establishment of a Programme for the Consolidation of the Mesoamerican Biological Corridor" (henceforth the MBC consolidation project); which assumed responsibility for working with the designated national technical liaisons in each country to coordinate, monitor and evaluate strategic policies, actions and in general, set the ground for the MBC implementation (Miller, Chang et al. 2001). During this preparatory phase, the countries have been coordinating and harmonizing their environmental laws on forest and biodiversity conservation, environmental protection and pollution control.

Protected areas are one of the most important parts of the MBC. Since the regional integration process, 589 protected areas have been established. Other activities that are promoted include: organic farming, forest management,

community forestry, agroforestry, semi-confined livestock, ecotourism, handicrafts, community agroecotourism, bioprospecting, use of non-timber forest products, cultivation of wild plants, butterfly farms, wild animal nurseries, wild rice production in wetlands, aquaculture, traditional fishing, and honey production. A Certificate of Sustainable Tourism was adopted as a regional trademark to identify competitive opportunities for sustainable tourism.

Funding Sources

The MBC receives support from a broad spectrum of development and conservation organizations that are implementing a wide variety of projects relevant to the MBC's goals. The World Bank (WB) assigned $888 million to proposals directly associated with the MBC and $4,541 million to proposals indirectly associated with the project. (BID, BM, 2001).

Another supporter is the Critical Ecosystem Partnership Fund (CEPF), a joint initiative of Conservation International (CI), the Global Environment Facility (GEF), the Government of Japan, the MacArthur Foundation and the World Bank (CEPF 2001). This fund finances conservation projects in biodiversity hotspots, and it focuses on the engagement of a wide range of public and private institutions to address conservation needs through coordinated regional efforts. Because of the large size of the entire Mesoamerica hotspot, CEPF initially prioritized the southern region of Mesoamerica (Nicaragua, Costa Rica and Panama)[9]. The argument for initially focusing only on the southern region was driven by a scientific assessment showing that this region holds 37 threatened

[9] Nonetheless last year the northern region was also included.

terrestrial vertebrate species. Twenty-five of those species are endemic for three areas in Costa Rica, including the Osa Peninsula.

The Mesoamerican Biological Corridor in Costa Rica

The MBC consolidation project established an office in Costa Rica during 1999; this office coordinates efforts for government and non-governmental organizations involved in establishing local biological corridors. Among others, the MBC national liaison office in Costa Rica has promoted popular participation by helping establish local committees in six biological corridors. This office also provides technical support to the biological corridors initiatives.

Organization of this Thesis

The next chapter provides an in-depth description of the Osa Peninsula and its social and political history that helps establish the context for a more detailed examination of the Osa Biological Corridor initiative. Chapter 2 also describes the design and implementation of the Osa BC project.

Chapter 3 reviews the literature and identifies several analytical issues to address the research questions in Chapters 5 and 6. The analytical issues are:
Concept of ICDPs: This concept helps to frame the Osa BC strategy. The importance to frame the Osa BC as an ICDP is that it allows for comparison with other projects especially regarding the obstacles that ICDPs have experienced in trying to achieve their goals.
ICDPs limitations: In general, ICDPs focus their work in buffer zones; several authors have pointed out some difficulties for projects that work in this area, and

limitations for people that live in these areas too. Some of the obstacles are: the ineffectiveness of many conservation actions to enhance people's well-being; skewed land tenure situation, which prevents people to manage the forest in a sustainable way; and disconnections between governmental resource use regulations and local resource use practices.

Different discourses within a project: The differences in worldviews, discourses and interests among the project's stakeholders have shown to have an important influence on what will be the project's main objectives and design.

Alternatives to ICDPs: Direct compensation approaches to conservation have been considered as an alternative to deal with some of the limitations of ICDPs. The discussion of this approach is important for the discussion of the Osa BC strategy, since this project is relying on payments for environmental services as the main alternative to achieve the project's objectives.

Concept of participation: It is assumed that achieving meaningful participation is crucial to achieve ICDPs' objectives. Participation is not a fixed state but varies in a continuum, therefore there are different levels of participation in which projects practice this concept. This conceptualization is useful to describe and analyze Osa BC participatory approach.

Limitations to achieve meaningful participation

- *Prioritization of objectives:* ICDPs' end objectives are still tied with the objectives of protected areas approach, so conservationists advocate participation if the community's goals are similar to the conservation goals.

- *Participatory exclusions and definition of the problem:* Conservation projects usually overlook marginalized groups within communities. Recognizing those groups is important for the participatory approach design, and also, to define the project's problem.
- *Land tenure security and willingness to participate:* If the land tenure situation is insecure, people are powerless to request spaces of participation and voice their needs, and also, a project may be less willing to negotiate conservation actions with them.

In Chapter 4 I describe the methods used in this research. I used primarily open-ended and semi-structured interviews to collect the information; and supported this information with the project's documents. I identified several topics from the interviews and used those to code the interviews. I identified a group of codes that gave answers to each research question; in addition, I guided the analysis of the information from the interviews with the analytical issues from Chapter 3.

Chapters 5 and 6 present the analysis of the information from interviewees' opinions and the project's documents that help to address the research questions. Chapter 5 addresses questions 1 and 2 mentioned above, which deal with identifying elements and limitations of the Osa Biological Corridor strategy. The first four analytical issues mentioned above helped to interpret the information (concept and limitations of ICDPs, different discourses and alternatives to ICDPs).

Chapter 6 addresses questions 3 and 4; they deal with the analysis of the Osa BC participatory approach and limitations to achieve meaningful participation. The analysis was framed using the two last analytical issues (concept and limitations of participation). In both chapters (Chapter 5 and 6), I make references to the influence of the Mesoamerican Biological Corridor on the Osa BC, since this regional project has influenced the strategy design and participatory approach of the Osa BC.

Chapter 7 concludes with an identification of the challenges facing the Osa BC, as well as recommendations for those involved in making and implement policy, and for future research.

CHAPTER 2 OSA PENINSULA: THE SOCIAL, POLITICAL AND ECONOMIC SETTING

This Chapter provides background information about the trends in the development policies and approaches to biodiversity protection in the Osa Peninsula. This Chapter focuses specifically on the historical roots of current conflicts over land use and tenure, which affects conservation projects like the Osa Biological Corridor. This information is important for the analysis presented in Chapter 5 and 6. The Chapter provides a description of the objectives and activities of the Osa BC.

Osa Peninsula and its Biological Richness

The Osa Peninsula is a 280,000 hectare humid lowland area in southwestern Costa Rica; its boundaries are the Pacific Ocean on the South and West, the "Sweet Gulf" on the East, and *Terraba-Sierpe* wetlands on the North. It is a large territory with a small and dispersed rural population (7,500 people) (CBO 2003). Agriculture is the most important economic activity of the region, 48.6% of the population is involved in a wide variety of productive activities including coffee, African palm, rice, beans, soy, pineapple, tobacco, sugarcane, wheat and cattle.

The peninsula's unique traits stem from its geographic location as part of the land bridge between North and South America and the resulting uncommon mix of climate, soils, vegetation and animals. It protects the only large remaining block of lowland rainforest on the Pacific side of Central America. (Donovan 1994).

Figure 4: Location of Osa Peninsula in Costa Rican map

The biodiversity richness in the peninsula is probably one of the highest in the world. In this small area there are approximately 2,000 species of plants, must of which are endemic. Also, several endangered large mammals are present in the area, such as *jaguars*[10], *dantas*[11] and *chanchos de monte*[12]. Marine and fresh-water resources are also very important. This is one of the few areas were marine and tropical forests systems interact with almost no human intervention (Almeida 2002). Another important feature of the Osa Peninsula is its *Golfo Dulce* (Sweet gulf). It is one of the four tropical fiords that exist in the world. Marine observers have discovered that hunchback whales use *Golfo Dulce* for raising their offspring. Another important place are the *Terraba-Sierpe* wetland; it

[10] Jaguars are the only member of the *Panthera* family to be found in the Americas and it is by far the biggest cat on the continent. In size its prey ranges from large domestic livestock such as cattle and horses (for which it has a poor reputation with local farmers)
[11] Large herbivorous that inhabit tropical rainforests, it is more or less the size of a small cow
[12] Wild pigs, they are also called pecaris.

has been designated as a Ramsar site[13] for protection of aquatic birds, and it is one of the largest wetlands of Central America Pacific coast.

It has been estimated that 50% of Costa Rica's species can be found in Osa Peninsula. In addition to the high endemism in this peninsula, there are South American species that cannot be found in other parts of Central America (Arias 2002). Osa Peninsula biodiversity has been studied for more than twenty years, studies have concluded that this region is one of the world's most biologically rich area (Arias 2002); that is why it has been categorized as a biological hotspot[14]. It has been suggested that Osa Peninsula's climate[15], geographic position, topography[16] and varied ecosystems[17] are very suitable to generate endemism and secure a wide range of biodiversity survival.

For the past thirty years, international and national organizations, have urged the Costa Rican government and civil society to take action to preserve this unique ecosystem. The Osa Biological Corridor is one of the most recent efforts to conserve Osa biodiversity. This chapter provides background information about the history of the Osa Peninsula, which has an important influence on this project's outcomes.

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[13] Ramsar sites are wetlands of global importance

[14] Regions that harbor great diversity of endemic species and have been significantly impacted by human activities.

[15] Mean annual precipitation is 5500 mm; distributed between a dry season (December – April) and a wet season (May – November). Mean annual temperature is 27°C (approximately 100 F), annual mean humidity is around 87%.

[16] Elevations on Osa Peninsula range between 200 and 760 m.

[17] There are at least three types of forests as defined by Holdridge's life zones: tropical wet, premontane wet and tropical moist (Sanchez-Azofeifa et al, 2002)

Osa Peninsula's People and History

The historical background of resource use in Osa Peninsula and its surroundings is important for understanding settlers resistance to conservation policies that were in place on the mid 1970's (See Appendix A the timeline of key events).

Costa Rica's South Pacific region (that includes the Osa Peninsula) had very low population density until the 1930's, when Costa Rican Banana Company a subsidiary of the United Fruit Company started to work in the region. National policies, which were influenced by the green revolution philosophy, promoted the deforestation of primary forests to undertake productive activities. Forests were considered unproductive lands that had to be converted to agriculture and pastures (CEDARENA, 2001). The government provided incentives to individuals or companies for such conversions, including the United Fruit Company. The company established banana and African palm plantations in *Golfito* and other locations in the South Pacific coast, and recruited people, mostly from Costa Rica's northern Pacific regions and Nicaragua, to work in the plantations. The presence of the company marked the beginning of a long-term pattern of development in which few profits remained in the area. The discovery of gold in what is now Corcovado National Park increased the rapid migration to the area.

In addition to these incentives, migrants came to the peninsula and its surroundings to acquire land. By the mid 1950's land clearing had become the primary way to claim land. Although some of the migrants cultivated crops for family consumption, most of the immigrants were more interested in hunting and

gold mining than agriculture[18] (CEDARENA 2001). In fact, the United Fruit Company never undertook any productive activities specifically in the Osa Peninsula, because of the high risk to starting crops there. This area is also suitable for logging, and this was what interested another foreign company that came to Osa Peninsula. In 1959, the government granted permission to the *Osa Productos Forestales* company (OPF) for all forestry and mining activities in several locations. However, settlers already occupied much of the land granted to the company. This situation created conflicts over land rights, and according to Cuello et al (1998), OPF became mired in disputes over land title and never undertook significant logging. Land invasions increased dramatically in the 1960's on both public and OPF lands. The company tried to prevent peasants from claiming land and to charge them rent. The peasants in several locations refused to pay and insisted that land was theirs. The government's official land reform agency (Institute of Land and Colonization, ITCO) took a very passive role (Cuello et al 1994), and a violent conflict occurred between the company and the peasants over the lands. In 1972 these conflicts worsened when a new OPF manager ordered guards to burn down houses and farms and shoot at peasants to scare them in order to regain control over lands claimed by squatters (Cuello, Brandon et al. 1998).

Three Protected Areas of ACOSA

In 1962, the OPF granted permission to Tropical Science Center (TSC) to construct a research facility (Rincon research facility) in OPF lands. For more

[18] Perhaps with reason because Osa Peninsula's soils are not very suitable for agriculture

than 10 years, thousands of scientists came to do research in this area. Many of these scientists were part of the Organization for Tropical Studies (OTS), a research center representing a consortium of U.S. and Costa Rican universities. This collaboration reinforced the preservationist approach to protect the Corcovado basin (where is located Corcovado National Park). The researchers, however, did not have much contact with Osa's residents; therefore, local people linked the scientists with the disliked OPF.

This company was planning to carry out controversial development projects, like big tourism resorts, construct roads and dredge the Corcovado lagoon and connect it to the sea so it could serve as an inland marina, and construct two thousand homesites (Cuello 1998). When scientists acknowledged this situation they tried to keep science and conservation separate from OPF. The Nature Conservancy (TNC), a well-known international organization, was working with OTS scientists; when they acknowledged the situation with OPF, these organizations started to discern ways to acquire the land from to protect it.

In 1973, a committee of the national legislature investigated the complaints against OPF, and the conflict in the area. This committee recommended the expropriation of much of the OPF land and the creation of a reserve on the Osa using some of this land. Government's decision was very influenced by scientists and others based outside the Osa (Cuello, Brandon et al. 1998). Representatives of international organizations like World Wildlife Fund (WWF) and TNC began working closely together by 1974 to raise funds to purchase the Corcovado Basin Area outright if the land-use conflicts could be resolved.

Given the pressures on this land created by gold mining and rapid migration, these organizations sought assurance from the government to support the park's long-term development and protection. They sent a report to the Director of the Park Service, Alvaro Ugalde, urged the government to take measures to protect the area before the dry season (when logging take place) of 1976. That is why Corcovado National Park was rapidly established in 1975. OPF agreed to a land swap for its Corcovado basin lands in exchange for national land elsewhere. According to CEDARENA study (2001) all the inhabitants were indemnified and relocated in a nearby town (Cañaza); only 6,850 hectares are still under IDA (Institute of Agrarian Development, former ITCO) control; that is why MINAE is negotiating with IDA the transfer of those lands (CBO 2001).

In 1978 the Golfo Dulce Forest Reserve (GDFR) was created on the boundaries of the CNP, from lands purchased from OPF and from ITCO. This reserve was placed under the legal control of the Forestry Department. The boundaries of CNP were expanded in 1980, increasing the size by nearly a third from 34,346 ha to nearly 42,000 ha. Several farms were expropriated and the many owners are still waiting for their compensation.

Another important protected area in ACOSA (Osa Conservation Area-SINAC) is the Piedras Blancas National Park. It borders on the *Golfo Dulce*, and extends from an area north of *Golfito* to the entry of the Osa Peninsula. This area was part of Corcovado NP, but a government decree (April 19, 1994) turned it into a new national park (CEDARENA 2001). Until recently, most part of this

park remains in private hands (mainly individual landowners) because the government lacks the funds to compensate the landowners for selling this land.

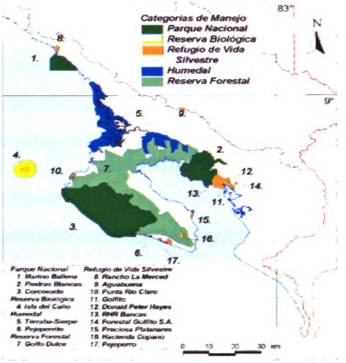

Figure 5: Location of ACOSA protected areas (Corcovado National Park= 3; Piedras Blancas National Park= 2; Golfo Duce Forest Reserve= 7. Images in this thesis are presented in color)

Challenges for Protected Areas Management: Land Tenure in Osa Peninsula

In Costa Rica, the protected areas system has experienced many problems in the enforcement of regulations. Their management has been challenging because landowners have not received their expropriation compensation. Most Costa Rican protected areas were established very rapidly, and in areas that

were already habited, so the promulgation process created many social conflicts, especially in the definition of property rights. Therefore the government have been limited to implement any management plan until clarifies the property rights on the area. Protected areas management in Osa Peninsula is being challenged by the conflictive land tenure situation, below are presented details about this problem in Corcovado NP and Golfo Dulce FR. The situation in Piedras Blancas is not considered here because the government has not undertaken any significant management decisions, since most lands are still privately owned.

Corcovado National Park

The legislation that created Corcovado NP assumed that the three hundred people who resided there would be resettled but, since it was such a rapid process, the government did not had resettlements funds. Corcovado Park was declared a disaster area in 1976 to enable the government with mechanisms to allow settlers to be paid with national funds for any *mejoras* (improvements) or for their rights of possession if they could prove they had been there for ten years. ITCO was the responsible agency for identifying who lived in the park and what *mejoras* they had made. The payment for land improvements exceeded the actual value of the settlers' because no site inspections were undertaken to verify the claim. In addition, even without legal title for the land, many settlers received government compensation for resettlement and the improvements (Christen 1994, in Cuello et al 1998).

More problems happened when the United Fruit Company subsidiary shut down its operations in 1984, provoking a wave of migration to Osa Peninsula.

Unemployed banana workers considered the protected areas land as open access resources and started to settle in those areas. [19]

Golfo Dulce Forest Reserve

When it was established, the GDFR was under the Forestry administration system, nevertheless the government undertook a very conflictive decision, they transferred 25,000 has of this Reserve to ITCO, in order to carry out an Agriculture and Forestry Development Plan to help deal with the situation of the squatters. The problem derives on the government's failures in coordinate land use actions between ITCO and Forestry department. By law, ITCO could not administered, give incentives to agricultural activities or grant land titles in lands that were under the forest system; but the government decided to transfer the lands to ITCO as a political response to the growing social conflicts in the area regarding the expansion of Corcovado park and the constant migration of squatters.

In 1993 the Institute of Agrarian Development, (IDA - former ITCO) decided to grant titles within GDFR because they considered it was alright to do it since the Natural Resource Ministry (MIRENEM) never compensated them for the lands they held inside the GDFR. IDA was going to grant titles to those who could demonstrate that were in possession of the land before the declaration of the Forest Reserve. Nevertheless, in 1994, IDA reversed itself when its own

[19] This created a lot of conflicts, because the unemployed workers went to San Jose, capital city, to protest for access to the park's natural resources. They were given lands in other sites, but this event created a precedent in Costa Rica's conservation history because from this time on conservation actions started to include social components.

legal office said that forest reserves are state lands, and therefore public, no titles could be granted within them. IDA concluded that people occupying these areas are doing so illegally and should be resettled and compensated with respect to improvements (*mejoras*) they made. The exceptions are those residents who can prove they were ten years before the declaration of the Forest Reserve. Conservationists fear about applying the concept of *mejoras* to the lands within the GDFR because it could lead to forest clearing in order to receive indemnization.

Also conservationists worry that titling will lead to real estate speculation and allow land to be sold especially to foreigners, who have been lately very interested in acquiring land elsewhere in Costa Rica, specifically in the coasts.

The land tenure in the GDFR is very complicated right now. Lands that were granted to ITCO in the early 1980's constitute twenty thousand hectares, or nearly one third of the GDFR. 450 households occupy these lands, peasants have claimed ownership of about 41,000 hectares of the Reserve, but only a small percentage of them have title. Not having title was limiting them to use the land for reforestation, getting logging permits or access bank credits for other activities.

SIPRAICO, a farm worker's union, is fighting to pressure the government to pay compensation to the peasants principally from *Golfo Dulce* Forest Reserve. They took the case to a Constitutional Court and won the case, this puts more pressure on the government; nevertheless, apparently the situation remains the same.

The successive expropriations of local residents and conflictive government policies in GDFR have fomented social conflicts over several decades, resulting in a transient and aggravated local population, fragmented and insecure land tenure, economic instability, unclear or inconsistent governmental development policies, a deep mistrust of government and rampant deforestation and pressure from gold mining.(Cabarle, Bauer et al. 1992; Cuello, Brandon et al. 1998).

Natural Resource Use Issues in Osa Peninsula

According to Cuello et al (1998) the primary types of resource use that affect biodiversity protection of Corcovado NP can be divided in consumptive (illegal hunting and wildlife trade, gold mining and forest clearing) and non-consumptive, like tourism.

Tourism is one of the most important sources of foreign income for Costa Rica, but Osa has received few of the benefits of the nation tourism boom (Cuello, 1998). While tourism in Corcovado NP has increased from 4,390 visitors in 1990 to 19,164 in 1994, most tourists do not come in contact with the communities on Osa. Most tourists go to lodges far away from rural communities and enter to the park for a day or two, therefore some authors think that tourism is not really benefiting local communities as planned.

By late 1990's there were no good records on the extent of illegal hunting and wildlife trade, nonetheless Cuello et al (1998) report as anecdotal information that wild pigs, *pacas*, macaws, monkeys, snakes and ornamental plants were commonly hunted for subsistence and for sale. In addition, Cuello et al (1998) notes that ACOSA officials blame gold miners for the problems of hunting in Osa

Peninsula. The government does not adequately control hunting activity. In 2004, *La Nacion*, one of the most read newspapers in Costa Rica published several articles (Loaiza 2004), (Parrales 2004) denouncing the number of animal parts found in Corcovado Park. According to the newspaper articles, many local organizations on the Osa Peninsula are worried about the increased hunting activity, what they suspect is done by outsiders sport hunters.

Gold mining continues to be controversial in Corcovado NP as well. Although artisanal gold mining has existed for long time, after United Fruit Company left the region many unemployed people came to Corcovado NP to mine for gold. Based on the results of a 1985 study documenting the negative imprints of mining[20], the government has tried to halt gold mining, compensate the miners and relocate them. At the same time, gold miners are hostile towards CNP and conservation policies, and argue that mining and timber companies do much more damage than artisanal techniques.

Logging has bee limited since the establishment of the CNP. In GDFR logging was allowed and subject to regulations. Nevertheless, as Cuello et al (1998) notes, logging regulations are rarely enforced. For example a thirty-three year rotation would allow for the annual extraction of only 16,279 cubic meters – however, between 1991 and 1994 an average of 23,500 cubic meters was legally approved.

Local and non-local conservationists have reacted against deforestation and tree monocultures in Osa Peninsula. In 1989 Stone Forestal, a timber company

[20] Commercial mining has been very destructive in Osa Peninsula, as it is mentioned in Cuello et al, 1998, ecologists they say have estimated that 90 percent of the reefs in *Golfo Dulce* have been destroyed by sediments from mining.

arrived to Osa Peninsula with the purpose to process timber from plantations for paper and other products. Their plans[21] were not very favorable to local communities because the company would rent locals' land to establish timber plantations, but they were the only ones that could harvest and process the timber. They could rescind the contracts with local people at any time, therefore local landowners would have a tree plantation with no means to take advantage of it (Rojas 2002).

A study to determine the Osa Peninsula's landscape fragmentation and deforestation status from 1979 to 1997 found that the proportion of the peninsula covered by forest declined from 97% in 1979 to 91% in 1987 and to 89% by 1997 (Sanchez-Azofeifa, Rivard et al. 2002). No deforestation was detected inside the Corcovado National Park itself. Outside the Corcovado NP, overall deforestation rates declined from 1.5% per year for 1979-1987 to 0.83% per year for 1987-1997. Deforestation was most pronounced beyond 5 km of the National Park boundary, where according to the study, land cover change is currently taking place on small forest islands created by previous frontal deforestation processes (Sanchez-Azofeifa, Rivard et al. 2002).

Of the three Holdridge life zones[22] observed on the Osa Peninsula, Sanchez-Azofeifa et al (2002) estimated that only 34% of the original forest cover of the Tropical Moist forest remains as such. The forest cover of the Premontane Wet

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[21] They were also planning to build a port facility in the *Golfo Dulce*, which according to several environmental groups would have greatly affected the Gulf. In 1994, local groups, together with organizations in the San Jose (capital city) and outside the country pressured the government, which finally stopped the project (Cuello, 1998), (Rojas 2002)

[22] L.R. Holdridge defined a system to classify life zones or ecosystems based on what he called 'biotemperature', temperature and precipitation. These variables define the vegetation forms in determine areas. All these variables together (climate and vegetation) define each life zone.

and Tropical Wet forest is estimated to be 60% and 88% of their original extension respectively. The Tropical Moist forest and Premontane wet are life zones not occurring within Corcovado NP, that is why deforestation rates are larger there. As of 1997, the study concluded that only 44% of the forest remaining on the peninsula was mature and that most of the forest located outside the Corcovado NP had been altered (Sanchez-Azofeifa, Rivard et al. 2002).

Acknowledging that deforestation was increasing in Osa Peninsula, in 1999 *Fundacion Cecropia*, a local Osa Peninsula NGO, contracted an independent impact assessment of timber extraction plans in Osa that had government permission from 1997 to 1999. It concluded that none of plans fulfilled all the requirements that prevent too much damage on the environment; and on this basis a ban on logging in this area. The government stopped giving logging permits nonetheless illegal logging is still going on (Rojas 2002).

Moving Towards People-Oriented Conservation Actions

Environmental policies in Osa before 1990's were preservationist oriented, in the sense that the means to achieve nature conservation involved establishing protected areas and buffer zones. With the emergence of the integrated conservation and development projects (ICDP)[23], conservation initiatives in Costa Rica and in Osa began to change towards more decentralized and inclusive decision-making processes in conservation actions. The creation of

[23] The ICDP concept will be discussed in detail in Chapter 3

Conservation Areas (SINAC)[24] reflects this change in government environmental policies. Golfo Dulce Forest Reserve, Corcovado and Piedras Blancas National Parks are within Osa Conservation Area (*Area de Conservacion Osa* - ACOSA). ACOSA has 410,402 has, constituting 8.6% of Costa Rica's territory. Approximately 170,000 has of ACOSA's territory are protected areas, 158.721 ha are terrestrial and 11.675 ha are marine protected areas (Almeida 2002).

Non-governmental actors have been more actively involved in developing ICDPs. One of the most widely known projects in Latin America that tried to link protected areas with local development happened in Osa. BOSCOSA project was a pilot ICDP project and its methodology and achievements have been instrumental for the design of ICDPs. In particular, this project set the foundations for the Osa Biological Corridor. BOSCOSA developed a Management Plan for *Golfo Dulce* Forest Reserve; this is a land use planning for the area and it proposed for the first time the idea to establish a biological corridor to support Corcovado biological connectivity. Also, the project intended to bring together different institutions (local organizations, project staff and government) to do a development plan for the whole region (Osa 2000)[25].

Osa Biological Corridor Initative

The Osa Biological Corridor is one component of the Mesoamerican Biological Corridor. It comprises 39,105 hectares. Costa Rican government

[24] Chapter 1 reviews SINAC system in more detail.
[25] Unfortunately I have not been able to gather information of the implementation of this Development Plan.

designated it one national priority area for the Environmental Payment Services System[26], and it is part of the Southern Mesoamerican biodiversity hotspots.

One of the main reasons why this local corridor was established was to help the conservation of Corcovado National Park (CNP) and the Golfo Dulce Forest Reserve (GDFR), in the Osa Peninsula.

As studies of the BOSCOSA project and Centro de Conservacion Tropical (CCT)[27] in Corcovado's buffer zone show, the idea to establish a biological corridor has been proposed by different stakeholders for over fifteen years.

According to Cuello (1998), despite the fact that 80% of the Peninsula is legally protected, rapid land-use changes and forest clearing threaten the biological integrity of the Peninsula.

A workshop organized by The Nature Conservancy (TNC) in 2000, identified important elements that must be protected in Osa Peninsula: 'jaguar', tropical forest and 'yolillo'. Since Corcovado NP area is not sufficient to maintain a healthy jaguar population, this workshop recommended the establishment of a Biological Corridor as the best approach to assure protection.

Two people were key in the starting point of the Osa BC. The first one, Alvaro Ugalde, is a political figure in Costa Rica who has been very influential in the establishment and management of Costa Rica's protected areas system. The other one, Steve Mack, is an American who was working in an Osa Peninsula local NGO, and was aware of funds coming from Fundacion CRUSA and the Osa

[26] The environmental services payment system is an economic tool that allows monetary compensation to forest landowners for the environmental services their forest provide. Further information about this system is provided in Chapter 1 and 3

[27] Tropical Conservation Center, it is a Costa Rican NGO which have its headquarters in San Jose, Costa Rica capital city.

Fundraiser campaign. These two worked to raise funds for starting the Osa Biological Corridor and bringing together the organizations working in Osa Peninsula.

The fundraiser campaign to strengthen ACOSA protected areas system started in 1999. The idea was to create a Trust for protected areas management. FICOSA, that is a local NGO of Osa Peninsula represented local communities in this fundraiser campaign The fundraiser campaign brought together almost all the NGOs and other organizations including the government. During the campaign meetings, people started to discuss the alternatives to face Osa Peninsula problems and decided that the best alternative was to unify efforts and budgets to establish connectivity between Corcovado and Piedras Blancas National Parks and to help paying expropriation of Piedras Blancas NP. The NGOs started to share information and making decisions on what activities to carry out. They also created the Technical Coalition in 2000, as a means to help coordinate each organization's activities. Two years later communities around Osa Peninsula were invited to become part of the Osa Biological Corridor. Their participation was formalized during a workshop that MBC National Office organized, in which a Local Committee was established[28].

[28] Chapter 5 will discuss in more detail the role and significance of this committee.

Osa Biological Corridor Implementation

During the first phase from April to December, 2001, the main objective of the Osa BC was consolidate the Osa Peninsula protected areas' system. The main activities during this phase were:

- Consolidate the Technical Coalition, and familiarize NGOs with working in a collaborative way.
- Define the biogeographical vision to consolidate the Osa biological corridor.
- Elaborate a map that defines the corridor area (see figure 6).
- Update the information about Osa Peninsula's land tenure status, current sustainable productive activities and biological data from the biological corridor. This information would be the foundation to determine where to establish the corridor (or connectivity) zones.
- Promote the access to the payment for environmental services system to farmers with insecure land tenure.
- Vigilance activities inside the protected areas.
- Environmental education activities for local communities' leaders. The educational campaign included training on legal aspects about protected areas, social and economic aspects of Osa Peninsula.

The most important product from these activities is the mapping and legal situation diagnosis of the land in the West side of the Osa BC (stage 1). CEDARENA developed a database with all the lands' legal situation, current and future use, and its suitability to do conservation projects.

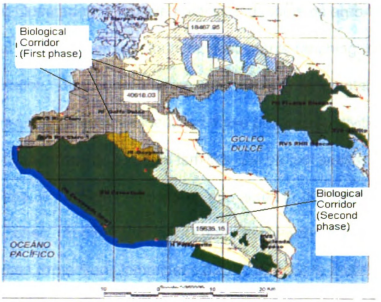

Figure 6: Proposed areas for the biological corridor (Images in this thesis are presented in color) (Arias, 2002)

During the second phase (that started in 2003), the *Fundación Neotrópica* is implementing a sub-project "Conservation of biodiversity and Sustainable Production in the Osa BC". The main objective is to develop integrated farms, where farmers can diversify their source of income, and at the same time undertake conservation actions like reforestation[29]. They will work with 15 families: Santa Cecilia, Rancho Quemado and San Juan de Sierpe; covering an area of 1000 hectares. Sixty percent of this area will be devoted to deforestation. The Local Committee selected the beneficiary families and the type of activities to carry out, and is the *Fundacion Neotropica* who is mainly providing the training, inputs and in short implementing the activities with the families.

[29] These activities have not started when I carried out the interviews.

Santa Cecilia will receive support to build a sewer system; fifteen families in Rancho Quemado will receive training and inputs on agro-forestry and silvo-pastoral systems, agro-ecotourism, sustainable ranching, bio-digesters, and reforestation. The project also includes also environmental education activities.

The Local Committee identified these proposed activities. Besides giving economic alternatives to these families, the project seeks to strengthen this committee, in addition to protecting 405 acres (1,000 hectares) of forests in critical zones. Another important sub-project involves strengthening local Natural Resources Protection Committees (COVIRENAS) to minimize the threat of deforestation and hunting in the area. The sub-project has hired park rangers to help enforce the laws that ban illegal deforestation, hunting and mining. It has also provided with economic incentives to landowners for conservation purposes (Eco-Index, 2003). Activities from the first phase of the project continue: the land tenure situation study; strengthening the Technical Coalition; and promoting the payment for environmental services system as a conservation tool.

The Osa BC through the Technical Coalition has gained CEPF (Critical ecosystem partnership fund) support, this has been important because its importance for the Mesoamerican biodiversity hotspot, the Osa BC has gained access to different funding sources to implement its activities.

Osa Biological Corridor Actors

Most of the NGO's that worked in the establishment of Corcovado National Park and in BOSCOSA project are still active in Osa Peninsula, most of them working as part of the Technical Coalition or Donor Coalition for the Osa

Biological Corridor. The organizations and people who are more actively involved in the project's decision-making and implementation can be categorized as follow:

- Non-Governmental Organizations of the Technical Coalition
- Government
- Donor agencies
- Local Committee

NGOs of the Technical Coalition

- *Fundación Neotropica:* This NGO is a private non-for profit organization, which is based in San Jose (Costa Rica's capital). Their focus is to provide technical assistance to different project's or processes that are seeking to find ways to use natural resources in a sustainable way and protect biodiversity. They have been working in Osa Peninsula since 1988. They were the national counterparts of the BOSCOSA project, and they implemented the final phases of this project. One of the BOSCOSA outcomes was the establishment of an Environmental Education Center in the Osa Peninsula. This NGO has used this center to promote environmental education and training in different areas for the local people. During phase 1, this organization focused on facilitating several training workshops for schoolteachers, local leaders and one activity with almost 250 kids of the area about topics related to the Osa BC. They also started to collect different documents and studies relevant to the Osa Peninsula, and started a small library within the environmental education center (Centro Juvenil Tropical).

For phase 2, they are working closely with the Local Committee implementing the integrated farms project with 15 families of three communities of the area.

- *INBio:* National Institute of Biodiverisity, this is a non-governmental biodiversity research and management center. They work nation wide inventorying and monitoring Costa Rica's biodiversity; they do bioprospecting activities and help SINAC (the government conservation areas system) and other conservation organizations providing their information to help in the decision making of conservation efforts. During phase 1, besides providing different biological studies that helped to define the Osa biological corridor area, they were also in charge of managing the project's funds.
- *CEDARENA:* Environmental and Natural Resources Law Center. This is a non-political, non-for-profit association that is based in San Jose. They try to bring the legal perspective to find solutions to the pressing environmental problems in Costa Rica and Central America. They have different programs like Conservation Land Trust, Management of Water Resources and also help different grassroots organizations to participate in policy-making processes. In the Osa BC they are in charge of implementing the land tenure study.
- *Fundación Corcovado:* This small NGO focuses its work in the Osa Peninsula, and works closely with COVIRENAS and government officials to control and protect ACOSA's protected areas. During phase 1 they help in the maintenance of Corcovado and Piedras Blancas National Parks. For phase 2, they received funding to hire park rangers to strengthen the enforcement of laws that prohibit illegal forestry, hunting and mining. They will also develop

educational activities with local people about ecotourism, and will provide support with funding and others to the Environmental Ministry.

- *Fundación Cecropia*: This green environmentalist non-governmental organization is based in the Osa Peninsula, and it has organized several campaigns to stop massive logging in the Osa Peninsula. Greenpeace helped them in one of those campaigns. They have been working in community development projects too. During Osa BC project phase 1 they were in charge of analyzing possible sustainable productive alternatives for Osa Peninsula. They developed a diagnosis of current productive projects in Osa Peninsula, nonetheless this organization left the Coalition therefore it was not possible to continue with the analysis.
- *Fundación TUVA*: United Lands for the Environtment Foudnation, is a Costa Rican non-governmental organization that works mainly with indigenous communities of Osa Peninsula (especially with Guaymi population) promoting sustainable productive activities and private conservation actions. They are active in the protection of Golfo Dulce (Sweet Gulf) marine resources. Although they are part of the technical coalition, they did not carried out an specific activities related to the Osa BC (at least during phase 1).

Government

- *ACOSA:* Osa Conservation Area. This is the regional office of the Environmental Ministry National System of Conservation Areas. There is more information about ACOSA in a previous section of this chapter. They have not carried out any specific activity for the Osa BC project.

Local Communities

- *Local Committee:* This Committee was created in 2001 as part of the project's efforts to have local participation. It is an open committee; in theory any Osa Peninsula resident can be part of it. Right now it has approximately 15 members; most of them are involved in tourism activities or environmentalist groups. There is a section in Chapter 5 that present extensive information about this committee and what they do in the project.

Donor agencies

- *Fundacion CR-USA*: Costa Rica – United States of America Foundation. The purpose of this private non-for profit bi-national organization is to promote cooperation between the two countries, within the framework of sustainable development, by supporting projects in technical cooperation, technological transfer and capacity building. They funded the Osa Conservation Campaign which brought together most of the Osa BC actors, also funded the projects' phase 1 and some activities of phase 2 (land tenure study, support for COVIRENAS and consolidation of the technical coalition).
- *The Nature Conservancy*: The mission of this international U.S based environmental organization is to preserve natural environments and wild species. Their approach, "Conservation by Design", helps identify the highest priority places that, if conserved, promise to ensure biodiversity on the long term. One of their strategies is to buy land for conservation; they have helped in paying some of the Piedras Blancas NP land. They also give technical support to define conservation strategies,

- *Conservación Internacional*: Conservation International. This non-profit U.S based international organization, focuses on the protection of the Earth's richest regions of plants and animal diversity in the hotspots. In Mesoamerica, they work on promoting the creation of biological corridors, and they have give small grants for the technical coalition work.
- *GEF – Small Grants Program, Costa Rica:* One of the focal areas of the United Nations Global Environmental Facility – Small Grants Programme of Costa Rica, is to support the participation of local communities in different biological corridors. They have a strategic partnership with MBC, identifying local initiatives that support biological corridors' objectives. In the Osa BC, they are supporting the integrated farms' project of phase 2.

Summary

This Chapter reviewed the key historical events that led to the establishment of three well-known protected areas in ACOSA and nation wide. Issues about the situation of the land tenure and resource use in Osa Peninsula are also reviewed, since they influence the conservation actions in the area. The Chapter ends with a detail description of the most important conservation action in Osa Peninsula at this moment, the Osa Biological Corridor, what are its main activities and actors.

In following chapters I will analyze the implementation of the Osa Biological Corridor, its relevance for the Osa Peninsula development and how they have put in practice the concept of Integrated Conservation and Development.

CHAPTER 3 ISSUES IN BIODIVERSITY CONSERVATION AND DEVELOPMENT

This Chapter reviews some of the main issues and controversies surrounding conservation programs that seek to achieve the twin goals of: natural ecosystem and biodiversity protection and, socio-economic development for local communities surrounding these integrated conservation and development projects (ICDPs). These issues help to frame the analysis of the Osa Biological Corridor presented in Chapters 5 and 6.

Biodiversity Protection and Protected Areas

The Convention on Biological Diversity (CBD) defines biodiversity as "the variability among living organisms from all sources including, *inter alia*, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems" (CBD 1992). It is the blanket term for natural biological wealth that undergirds human life and well-being (Reid et al 1989; Field 2001).

It is difficult to find somebody who does not agree that biodiversity protection is important. Nonetheless there are divergent perspectives on how to manage it. It is difficult to measure, monitor and assess biodiversity, and there is incomplete information about the relationship between species and habitats, and causes and rates of extinction. Consequently, it is challenging to define what measures to take that best protect biodiversity (Brown et al, 1993; Mann, 1991 cited in Domroese, 1996).

Protected Areas System

The establishment of protected areas is one of the most widely promoted strategies for the conservation of biodiversity. There are more than 100,000 protected areas worldwide that show an extraordinary variety of management objectives. They have one main characteristic: to limit human negative intervention in different natural ecosystems. But their objectives and management range from controlled reserves with no human intervention, to cultural landscapes with thousands of human inhabitants. Such variation in implementation led organizations like the World Commission on Protected Areas (WCPA) and the World Conservation Union (IUCN) to propose a classification for protected areas according to their different objectives and management (IUCN, 1984).

The classification of protected areas that is now widely used around the world is (Chap, Blyth et al. 2003) :

Category Ia: Strict nature reserve, for scientific purposes.

Category Ib: Wilderness area, managed for wilderness protection.

Category II: National Park, for ecosystem protection and recreation.

Category III: Natural monument, managed mainly for conservation of specific natural features.

Category IV: Habitat/species management area: conservation through management intervention.

Category V: Protected landscape/seascape, with recreation purposes

Category VI: Managed-resource protected area, managed for the sustainable use of natural resources.

One general characteristic of the different protected areas involves their limited capacity to protect biodiversity effectively. First, the area of most national parks and others (especially from categories I to IV) has proven to be too small for maintaining viable ecosystems, evolutionary processes and healthy populations of different species, especially large mammals that require large territories for survival. In fact, some criticize protected areas for becoming isolated patches where wildlife within face the high risk of extinction due to inbreeding and sometimes the lack of food sources.

Second, conservationists have started to realize that the failure to incorporate local people encourages encroachment and illegal harvesting and thereby undermines the goal of biodiversity protection (Esposito, 2002).

From Preservation[30] to Conservation: Integrated Conservation and Development

The limitations of the parks system made conservationists rethink the protected areas system. Since the early 1980s the international conservation movement has moved away from protectionist approach and command and control policies that promoted the idea of separateness of human and nature (see the World Conservation Strategy (IUCN, UNEP & WWF, 1981; Caring for the Earth IUCN, UNEP & WWF, 1991) (Jeanrenaud 2002)).

[30] Also called protectionism, it is the philosophy that underlies the protected areas system, implies the importance to separate humans and nature to achieve nature protection.

During this period, conservation approaches started to incorporate the sustainable development[31] principles and concept, which were defined in 1987 by the World Commission on Environment and Development (Brundtland Commission). This commission stated that it is impossible to separate economic development issues from environment issues (Brown 2003). It considered poverty as a major cause and effect of global environmental problems. From this perspective, it is futile to attempt to deal with environmental problems without a broader perspective that encompasses the factors underlying world poverty and international inequality. Although several authors (Singh and Strickland 1993; Sen 1997; Bandarage 1999) disagree with the notion of poverty as a cause of environmental degradation [32], nonetheless these ideas frame the rationale to include activities that lead to sustainable development as part of conservation projects.

New revisionist ecological research questions two other main planks of nature preservation. First, this approach asserts that pristine environments untouched by humans have existed until the recent past. Second, indigenous communities have been relatively isolated and therefore used their resources sustainably (Agrawal and Gibson 2001). In response, several authors (mentioned in Agrawal and Gibson, 2001) argue that there are no pristine areas; humans

[31] Sustainable development leads to sustainable use of natural resources. It is 'the use of components of biological diversity in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations'.

[32] These authors see poverty as the outcome of inequitable structures, uneven development patterns and constraints imposed by ruling elites. Therefore the notion of equity is central to sustainable development and implies a more equal distribution of assets and the enhancement of capabilities and opportunities of the most deprived.

have shaped the environment for thousands of years; and therefore they question the separateness of natural areas and humans as the best way to protect nature.

Considering those arguments, the conservation movement adopted the idea of people-oriented conservation that focuses on the mutual interdependence of biodiversity protection and promotion of development. There are different variations of people-oriented conservation approaches, which seek to enhance wildlife/biodiversity conservation, local community participation and economic incentives for sustainable natural resources management. One of the most widely known is the ICDP (Integrated Conservation and Development Projects). An ICDP has 'core protected areas' in which uses are restricted; outside the core areas are buffer zones where activities to promote sustainable development and provide local people with sources of income compatible with park management objectives are encouraged (Campbell and Vainio-Matilla 2003).

The philosophy underlying ICDPs considers protected areas in developing countries will survive only in so far as they address human concerns (1982 World Parks Congress). The activities that have been proposed to support this philosophical statement include local participation, education, development activities and opening park resources to local use.

An evaluation of several ICDP projects around the world (in People and Parks (Wells et al, 1992) cited in Brandon 2001), identified the following main strategies of ICDP projects:

- enhanced park management and/or creating buffer zones around protected areas.

- providing compensation or substitution for local people for lost access to resources, and

- encouraging local social and economic development.

Brandon (2001) mentioned that compensation and substitution strategies were intended to reduce the economic burden on those people who would otherwise have few alternative means of livelihood.

Esposito (2002) argue that conservation organizations and governments in Mesoamerican countries have been active proponents of ICDPs, for twp reasons. First, ICDPs provide local people access to natural resources that have been denied by the more protectionist approaches. Second, in response to the socioeconomic disruption and political difficulties created after civil conflicts throughout Central America and Mexico (Mesoamerica), ICDPs offer governments more comprehensive regional projects that serve as symbols of reconciliation while meeting environmental and development needs.

The Mesoamerican Biological Corridor is an example of a large, multi-national ICDP; which has used the concept of biological corridors to promote the sustainable development model in the region and the viability of the region's protected areas system for biodiversity protection.

Concept of Biological Corridors

Technically, biological / biodiversity corridors are networks of protected areas and landscape management (CEPF, 2001). In principle, they are large habitat

parcels that are deemed essential for maintaining biodiversity and large-scale ecological processes (Saunders and Hobbs 1991). The main function of the corridors is to connect biodiversity areas through a patchwork of sustainable land uses, increasing mobility and genetic exchange among individuals of fauna and flora even in the absence of large extensions of continuous natural habitat. As a result, such corridors are intended to promote regional-scale conservation based on individual protected areas, but also to maintain the ecosystem processes needed in order to sustain biodiversity into the future. In this context, small habitat fragments within corridors perform several related functions - connecting or reconnecting larger areas, maintaining heterogeneity in the habitat matrix, and providing refuge for species that require the unique environments present in these fragments (Saunders and Hobbs 1991).

However, many conservation biologists question the effectiveness of biological corridors (Nicholls et al (1991). Many acknowledge the potential benefits of corridors, but point out the costs such as the potential to spread disease, predators and feral animals. Critics also argue that there is no certainty that corridors can actually enhance connectivity, because there is no easy experimental design that offers straightforward evidence that corridors are effective. Such a design, Nicholls et al (1991) argues, would need to clear patches of well-conserved forests, and build corridors in some patches but not in all of them, to determine whether the presence of corridors significantly affected recolonization of the forest fragments. Clear parts of forests for studies will most likely be unacceptable, and that is why scientists (Saunders and Hobbs 1991)

question the allocation of scarce conservation resources to managing corridors when their overall role contribution remains questionable.

Despite the debate over the contribution of biological corridors to the conservation of biodiversity, they do provide a framework for sustainable development in Mesoamerica. Miller et al (2001) argue that the corridor approach relies on strategic partnerships in order to develop strategies for land and water use that simultaneously conserve biodiversity and sustain farming, forestry, fisheries and other human uses.

These partnerships imply that different actors with different perspectives, interests and worldviews will be working together to find ways to achieve the project's goals. Their differences could stem from the different disciplines and backgrounds that are needed to deal with the complex biological, social and economic issues that are part of integrated conservation and development projects like the MBC.

Different Objectives, Different Worldviews

Different discourses can enrich project design and implementation and offer the opportunity for creative solutions. But they can also hinder implementation if differences are not acknowledged before project implementation, and good communication channels are not established from the beginning. Unless different worldviews are acknowledged, it is difficult for the actors to identify key issues and reach consensus about what to do and how to do it in a specific project. Worldviews shape how a project should be designed and implemented, and they clearly influence questions such as: Is biodiversity conservation the primary

objective of ICDPs? Can conservation and development objectives both be equivalent project goals? Whose interests count - local, global? Must they be based around a core-protected area?

Jeanrenaud (2002) identified three main different worldviews within conservation organizations based on the perceived relationship between humans and nature.

The cosmocentric/ecocentric worldview promotes ecosystem, ecoregional and biodiversity conservation. People using this perspective champion global conservation planning and management based predominantly on positivist scientific values, but many hold deep green views[33]. Biological scientists end to adopt this perspective, and it is often influenced by a protectionist concern in which rural people are seen as a threat to nature. From this perspective, conservation concerns trump social concerns. A related perspective is what Jeanrenaud calls anthropocentric elitism or protectionism which also sees people as a threat to nature, but promotes protected areas as a means for 'nation building.'

A second worldview, the anthropocentric neo-liberal, promotes a distinct conservation agenda that emphasizes economic and political processes, such as market relationships, structural adjustment and world trade. This perspective does not ignore local people and within an economic framework advocates participatory processes as a means to enhance project effectiveness.

[33] This refers to the philosophical principles of Deep Ecology, which argue that human interference on nature should be limited. http://www.deepecology.org/deepplatform.html

The radical anthropocentric worldview emphasizes human rights issues in natural resource management and participatory approaches to conservation. Influenced by critics of orthodox development and conservation models that point out the effects of unequal power structures and relations, this perspective focuses on livelihood needs and the rights of marginalized groups and indigenous people. This worldview is commonly found among those with social anthropological, development and new ecology backgrounds, as well as grassroots practitioners. This perspective is appealing to many dissatisfied with the failures of traditional conservation (Jeanrenaud 2002).

Integrated Conservation and Development Projects in Practice

After more than two decades of experience, conservation and development projects confront an increasing number of criticisms about their effectiveness in protecting biodiversity and promoting rural development. In part this critique arises because ICDPs seek to combine some of the most difficult elements of biodiversity protection with some of the most difficult elements of rural development (Brandon 2001).

At the same time, the difficulty in reconciling these two objectives arises because those interested in rural development unrealistically expect conservation projects and parks to "cure structural problems such as poverty, unequal land distribution and resource allocation, economic injustice and market failure; nonetheless, the solutions of these problems lie elsewhere; 'it is unreasonable to expect parks to provide solutions for whole regions" (Brandon 2001). As Wilshusen et al (2002) notes, protectionists are worried because they assume

that most people-oriented conservation approaches emphasize development more than nature protection, and thereby perceive that biodiversity protection is jeopardized. Consequently, from this perspective, protected areas must restrict human occupation and use in order to preserve nature. (Wilshusen, Brechin et al. 2002)

Protectionists argue there is little evidence that reducing poverty or promoting local development diminishes pressure on resources. In certain situations, if the benefits from the project and conservation outcomes are not clear in the eyes of the participants, people may continue to use natural resources at the same rate or increase their consumption and put greater pressure on biodiversity. From this perspective, Brandon (2001) offers the following: parks must be seen as a cornerstone for biodiversity conservation, and not all protected lands should be open to human use.

But, improved park management and biodiversity conservation should not be equated with sustainable development. In remote areas, where most protected areas are located, ICDP projects spend substantial amounts of money trying to achieve sustainable development (promoting small-scale agriculture). But these areas will continue to be marginally productive with limited market access. Under these conditions, ICDPs will condemn the poor to lives of poverty in the name of 'decentralization' and 'sustainable use', and at the same time they will fail to protect biodiversity.

The apparent failures of ICDPs to deal with achieving conservation and sustainable development at the same time could be the result of external factors in addition to the intrinsic complexity that this type of project implies.

Obstacles to Achieving Biodiversity Conservation and Development

Costs of Conservation on Local People

Generally, one of ICDPs goals is to promote local development through environmentally friendly activities. Many radical anthropocentrists criticize that instead of enhancing people's well-being, biodiversity conservation often implies costs for local people. Buffer zone management in many areas has been restricting, disregarding and essentializing of local people. Instead of giving alternatives for sustainable livelihoods, these areas often "extend state authority over settlements and land use well beyond protected area boundaries, thereby heightening the insecurity of local land tenure" (Lynagh and Urich 2002).

In a study of community willingness to participate in community-based wildlife management (CWM) in Tanzania, Songorwa (1999) found that after an initial period of enthusiasm, people were reluctant to participate because by supporting the project they still faced significant risk. Elephants and hippopotamus damaged their crops and was sometimes life threatening. In other words, CWM helped to protect wildlife, but the costs to villagers also increased to the point where they experienced severe food shortages. When asked their opinion of the project, many were suspicious because they still did not clearly understand the project. Many speculated that the program was a government strategy to force them out

of the area. They also believed that after the zoning and demarcating of village wildlife management areas, they were not going to be allowed to utilize natural resources in those areas. Local perception, in summary, was that outsiders value wildlife more than they value the communities (Songorwa 1999).

Colchester (1996, in Lynagh et al 2002) affirms that although there have been honest efforts from conservation organizations to incorporate local communities and traditional resource management systems in buffer zones, the preservationist discourse of large development agencies put pressure to continue with top-down approaches in conservation projects. One reason to continue with top-down approaches is that some protectionists see biodiversity protection as a moral imperative. For them, although economic rationale for preserving biodiversity is compelling, when considering it in terms of net present value (the deciding factor for most resource users), tropical forests (and other ecosystems resources) are 'worth more dead than alive'; that is why the protection mandate rests more on moral rationale, where the international community can act on behalf of nature as 'global citizens' (Terborgh 1999).

Effects of Land Tenure on Support for Conservation Actions

Even though projects make an effort to incorporate local communities, policies that affect access to land and natural resources commonly prevent local groups from getting involved and from supporting conservation actions (Lynagh and Urich 2002; Becker 2003). When people lack legal recognition to use the land and to exclude newcomers, they have few incentives to manage the forest in a long-term sustainable way. Under these conditions, many communities in

public lands become increasingly responsive to market pressures to overexploit and join in the free-for-all, open access schemes. Land ownership, therefore, is an important factor in the management of buffer zones.

In an ICDP project in Peru, there were two fundamental preconditions for people's involvement and achievement of sustainable natural resource management. First, local communities had secure property rights favoring a long-term outlook toward common property. Second, they had a long history of local decision-making about land allocation, and thus the capacity to regulate forest exploitation. Although the communities in this case were under common property regime, it is important to note that secure property rights supported the projects goals (Becker 2003).

When the land is privately owned, project implementators usually negotiate with landowners to compensate for the use restrictions in their lands (Lynagh and Urich 2002). Nevertheless, for small landowners or communal lands lacking secure property rights, negotiations may not occur.

In another case study of an ICDP irrigation project in the Philippines, Lynagh et al (2002) compared the readiness of participation and the project's distribution of benefits for two groups of farmers living in the buffer zones. The first group had relatively secure tenure in a wet-rice-producing area on the fringes of the national park; the second group had either poor tenure security or were deemed landless who used the national park resources for additional income. Because it was an irrigation project to improve rice production, it was easier and less risky for the project to work only with the first group of farmers. Farmers from the

second group were given fewer opportunities to participate and benefit from the project because of the tenure security status. They mainly benefited from being employed in the new established crops, but this income was usually insufficient that is why farmers from the second group relied heavily in the forest resources for survival. Lynagh, et al (2002) concluded that the project was unable to achieve more sustainable use of natural resources and therefore maintain the protected area.

Conflicts over Resource Use Regulations

Conflicts over resource use and the conservation agenda objectives can be also the result of multiple actors with different worldviews and interests, whose actions sometimes clash and create enduring conflicts. Several authors (in Lynagh et al, 2002) argue that there is a disconnection between local people and various implementation agencies. Local people usually do not know or agree with the restrictions on natural resources use, therefore some consider it their right to use the resources, since many households in this areas still rely heavily on edible forest products, grazing land, firewood, and construction materials (Lynagh and Urich 2002).

Formal institutions, like the government, commonly address these conflicts, albeit unsuccessfully. Several authors (McKean 1996; Lynch and Alcorn 1994) suggest that local institutions could complement formal institutions in dealing with conservation problems and help to overcome the disconnections and miscommunications between local communities and other actors.

Nonetheless, there are several limitations on a more predominant role of local institutions in conservation and development projects. In areas where local residents have been negatively affected by conservation actions, there is often a lack of trust between government, NGOs and local institutions to work together.

For some protectionist advocates, devolved control of natural resource management is not possible in areas undergoing rapid social change, because in these areas traditional management systems are often overwhelmed, eroded or non-existent; or management for biodiversity conservation may not be a local objective (Brandon, 2001).

Alternative to ICDPs

Several authors (Ferraro 2001), (Brandon 2001), (Smith and Scherr 2003) criticize ICDPs implementation failures, and propose that conservation interventions should be simpler. They argue that practitioners should focus on a few activities with high probabilities of success, and that could be long term, provide direct incentives (cash payments) to people who are conserving and reduce social and political conflicts over resource allocation. Another favorable point is that direct payments ensures that financial resources stay in the region and not go in salaries to outside development technicians (Ferraro, 2001).

Ferraro (2001) calls this alternative, 'conservation performance payments', which can be described as a system of institutional arrangements to facilitate conservation contracting between international or national actors and individuals or groups that supply ecosystems services. Many economists agree that direct

compensation for the environmental services[34] that forests provide is one of the most efficient forms of conservation (Smith and Scherr 2003).

There are certainly a number of difficulties in designing markets for environmental services. At this point there are only a few examples from which to draw lessons, and there is certainly no consensus that this is the approach to follow in conservation practice. Some countries have started this type of compensation system by developing a 'carbon market', in which developing countries can sell carbon sequestration service from their forests that enable industrialized countries to meet part of their emission reduction commitments. This type of markets is not implemented yet, since all developed countries must first agree on the core elements of the Kyoto Protocol, the clean development mechanism (CDM).

Critics of this approach, such as Brandon (2001) argue that projects and policy makers should not assume that economic incentives and disincentives can be readily defined to achieve biodiversity conservation. It is also problematic to assume that those incentives can change people's attitudes towards conservation and convert overexploitation to sustainable use of biological resources. Brandon (2001) mentions several cases where projects have had difficulties in defining which type of incentive is "right" for different type of people and groups. People tend to place different values on nature, so it is difficult to standardize a type of incentives that will work for all. Another problem of this

[34] Environmental services are services that forests and other natural ecosystems provide. Although humans get benefited, it is difficult to establish a market and monetary value to these services. Examples of these services are: biodiversity protection, carbon sequestration and scenic beauty.

approach is that it is not clear whether incentives should target people who are not threatening biodiversity or those who are. It is not clear also in what situations or on what extent does incentives work best, at national, local or community level; and how to avoid getting a 'free-rider'[35] problem. For Brandon (2001), incentives work best when there are strong local systems of social control and sanction, but these are rapidly eroding all over the world.

Other criticisms, mainly from a radical anthropocentric perspective have called attention to the ways in which direct compensation systems incorporate social justice issues in their design (Madrigal, et al, 2000; Smith and Scherr, 2003; Lendel-Mills, et al, 2002). Many forest areas in third world countries do not have clearly defined rights to forests and forest resources; in the presence of a carbon market it is possible that interests of the powerful may take priority over the interests of disadvantaged groups. It is important that governments safeguard the rights of local communities to revenues from carbon-offset sales. Without supportive legislation, those with formal land titles may capture revenues, while communities with customary rights or informal land tenure systems are excluded.

Access to the system is an issue of this system. In the example of Costa Rica's Payment for Environmental Services, although in theory all the people have the equal opportunities to access the system, there are no equal conditions. Transaction costs for poor people are greater; they face a lot of obstacles because part of the procedures has to be done in San Jose, the capital city. Also,

[35] Free riding means holding back on one's contribution so as to get the benefits while bearing less of the cost (Field, 2001)

small landowners have to pay the same fees in lawyers and forest engineers as big landowners, so net benefits are lower than for big landowners.

Women have less access to this system than men, because land tenure is held mostly by men. So even if a woman stays on the property while the husband migrates to work in other places, the payments have to be given to the one having the land tenure, that is, the man.

Besides the equity issues, market-based approaches to conservation have the problem of limiting people's participation on conservation to receive a payment for a fixed period of time. So the system does not lead to an internalization of the importance of conservation and to a more sustainable use of natural resources.

Participation in Conservation and Development Projects

Humans have shaped the environment for thousands of years, and are an integral part of actions intended to protect the environment. Therefore, participatory approach has been widely promoted as a way to integrate conservation and development (Brown and Wyckoff-Baird 1994; Wells, Brandon et al. 1992). It is considered as vital for understanding the multiple factors involved in the human-environment relationship, for implementing appropriate management strategies and increasing potential for durable change and self-sufficient programs (Domroese 1996).

Not everybody agrees that different actors' participation will produce durable management strategies for natural ecosystems. Protectionist's advocates argue that 'parks may have been created by 'top down' forces, but that is the only way

they could have been created. 'Bottom up' in situ efforts have created.... nothing of a scale sufficient to preserve large portions of ecosystems" (Schwartzman, Moreira et al. 2000). Nevertheless, indigenous groups have established property rights to 20% of the Brazilian Amazon (1 million km^2); inhabited by approximately 200,000 people. Interestingly, these areas are virtually the only protected areas that effectively halt the expansion of forest clearing, as it is shown by studies with satellite images mentioned by Schwartzmann (2000), which show the location of new deforestation clearings outside indigenous reserves. Also in Mexico there are cases where small-scale and sustainable uses have been very useful in reversing large-scale land-use conversion of tropical forests. Assuming that protected areas in remote areas are not under pressure to large-scale interventions is very naïve; these areas usually overlap with or adjoin areas with preexisting land-use rights, so work proactively with communities in the buffer zones is one way to deal with these political realities, instead of ignoring them (Wilshusen, Brechin et al. 2002).

Some project aims of participation are the actors' empowerment, nonetheless conservation projects (ICDPs, community-based conservation and other approaches) most likely conceptualize participation as a means of achieving improved social and economic objectives (Little 1994; Campbell and Vainio-Matilla 2003). Project objectives and activities differ when viewing participation as a mean to achieve external projects goals and as an end that seeks for the empowerment of the actors. Seeking participation as an end is what several authors refer as meaningful participation. The rationale for different

authors to advocate for meaningful participation is that when achieved, it will result in long-term engagement of those involved in the process of solution finding (Cleaver 2002; Campbell and Vainio-Matilla 2003; Cornwall 2003).

The Concept of Participation

Much of what we think about when referring to participation is spatial. Efforts to engage participation can be though of as 'making room for different opinion to be heard where previously there where limited opportunities (Cornwall 2002). For some, participation is defined as: "an active process by which beneficiary or client groups influence the direction and execution of a development project with a view to enhancing their well-being in terms of income, personal growth, self reliance or other values they cherish (Little 1994).

This contrasts with conventional development practice, where the actors or participants had a passive role as recipients of aid or training. In response, participatory development projects promote an active involvement of all 'actors' in defining the project's objectives, design and implementation.

Intimately related to participation is the term "empowerment", which has gained considerable currency in recent mainstream development discourse. In the report on the International Conference on Sustainable Development and Poverty Eradication, Singh et al (1993) refers to empowerment as the means to build the capacity of communities to respond to a changing environment by inducing appropriate, innovative change internally and externally. It fosters critical consciousness about inequality, social support to overcome self-blame and the perceived power to effect change. They argue that direct participation in

community decision-making and a representative government is a prerequisite for empowerment. But just like participation, this concept is not rigid and its meaning and use has evolved over time. Below I note briefly some of the main shifts of these concepts, participation and empowerment, in development practice.

Participation – an Overview. The idea of participation first caught the attention of mainstream development agencies during the 1970's as a means to make their interventions more effective. During this period participatory development emerged as a new field within development practice. By the 1980's, more attention was focused on 'community participation' in terms of the sharing of benefits by the poor, project efficiency and effectiveness and cost sharing, with scant attention to empowerment or capacity building goals. Beneficiary participation then was more a matter of pragmatism than a principle. From this perspective it seemed reasonable that an external agent like the government, donors or others would organize local people in self-help groups or committees, thereby creating a means for them to have some input into project implementation.

These projects gave rise later to the establishment of new local level institutions, where the 'beneficiaries had a more active role. Campbell et al (2003) mentions that this shift is one important characteristic that defines participatory development initiatives; and to the emergence of other schemes like co-management.

Another version of participation in development took place with the emergence of 'civil society organizations' - or NGOs, which concurred with the 'marriage' and spread of liberal democratic theory and neo-liberal economic policy. NGOs were presumed to be closer to 'the people' and therefore more suitable to take the lead in the delivery of development. They could replace in some instances the State, and, as Cornwall (2002) mentions, absorb a growing proportion of aid budgets. An important observation about these organizations is that through some of them, excluded individuals could find a collective presence and voice. Many NGOs using participatory approaches in development practice also have begun to talk about rights, recognition and redistribution: about 'people's self-development, which rather than inserting 'the people' or 'the poor' into development, seeks to develop their capacity to negotiate on new terms with the powerful. Neo-liberal consumer ethos influenced the definition of 'communities' as consumer of services. Active involvement was considered crucial to the achievement of effective outcomes. The assumption was that to make 'people' more committed they needed to give something back, not only receive benefits from projects. It was argued that people value things more if they pay for them. In this sense, Cornwall (2002) argues that participation and empowerment were progressively recast within the market idiom.

The third 'version of participation' mentioned by Cornwall (2002) is linked with the narratives of good governance of the late 1990's that promote enhanced equity and efficiency of decentralized governance. Good governance gives rise to new officialized spaces for citizen participation, accompanied in some context

by a transfer of resource and decision-making powers. Some countries have enacted national legislation in this regard, but just as other forms of participation, it is debatable if decentralized local governance actually enables the poorer and marginalized to participate.

More recently, some development agencies are talking about rights and social justice. This has led the emergence of another version of participation that recasts 'the people' or 'the poor' as neither passive beneficiaries nor consumers empowered to make choices, but as agents: the 'makers and shapers'. In emphasizing obligation and responsibility, the rights-based approach opens up the possibilities of a renewed focus on the root cause of poverty and exclusion, and on the relations of power that sustain inequity (Cornwall 2002).

There is great debate on how these concepts are implemented, authors like (Cornwall 2002; Cooke and Kothari 2001) argue that empowerment, which was once associated with a process through which people discovered their own potentialities has become an instrument for managed intervention.

Acknowledging the evolving nature of participation and empowerment, several authors (in Campbell et al, 2003) agree that the meaning of participation is not a fixed state but it can be viewed as a position in a continuum between manipulation to achieve external project goals to empowerment of actors.

Levels of Participation

Since participation is not a fixed state, several authors mention that there are different levels of community participation: information sharing, nominal, consultative, decision-making and action initiation (Perez, 1997; Paul, 1987 cited

in Pratiwi, 2001). The information sharing level is considered the lowest level in terms of participation; local communities are informed by the project planners what are the objectives and activities of the project. Project staff may have already collected data about the area to start implementation. The types of community involvement at this level may be field participating in surveys, interviews or public meetings.

The nominal level, community members may participate by providing resources for the project. The involvement of community members may be through activities such as working for the project or developing their own private enterprises. This level is usually characterized by individual involvement; community members may gain economic benefits from the project. At the consultative level, community members are consulted on some development issues related to the project. Consultation may include public meetings, focus groups, public opinion surveys and other methods, and occurs before the project is developed. At this level, community leaders usually represent the local community. The leaders may share their knowledge, perspective and opinions of the project, but their opinions may or may not influence the nature and content of the project. At this level, community members may start taking a group position.

At the decision making level, communities have opportunities to influence the objectives of project. Decisions are made before and during project development, and usually some key community leaders are involved in the project's implementation.

At the action initiation level, communities are asked to improve their ability to manage and control the project implementation. Community members should be ready to be empowered and proactive in implementing the project.

The Challenge of Meaningful Participation

Conservation projects consider local population participation in implementation, but when it comes to decision-making, "Managers must know where to draw the line", and thereby be prepare to exclude people from decisions that affect their lives (Jeanrenaud, 2002).

The above assertion exemplifies what people from the participatory development field criticize about ICDPs and other conservation approaches. Because the main objectives of ICDPs follows protectionist objectives, conservation projects advocate participation if the community's goals are similar as the project's goals (Campbell and Vainio-Matilla 2003; Jeanrenaud 2002). Participation is often used in a pragmatic and manipulative manner to make people agree with conservation purposes, and it is considered to the extent that it contributes to a project's efficiency. Leach et al, (1999) states that local beneficiaries are treated as passive recipients, in this sense, some authors are questioning: Whose voices are heard? Whose choices are chosen?

In her review of the implementation of several conservation and development projects in Costa Rica, Campbell (2002) identifies that conservation activities have not been very successful in adopting the community participation concept, where the benefits from two of the most important conservation activities, eco-tourism and bioprospecting, have been unequally distributed. Local communities

often receive a small portion of the revenues from those activities; but their participation in planning those activities has been elusive.

These findings coincide with the criticisms done to the participatory approaches of ICDP projects, when often they equate participation with educate people regarding the necessity for conservation. Few projects specify what participation means, or how participation is expected to reduce threats to protected areas (Campbell and Vainio-Matilla 2003).

Jeanrenaud (2002) agrees that ICDP projects have failed to acknowledge the politics of participatory processes – for example, how local institutional bias affects local representation, entitlements and incentives to speak about resources.

Participation of Marginalized Groups

One limitation on conservation and development projects in achieving meaningful participation is the failure to identify those more marginalized and invisible society groups, and therefore exclude them from the spaces of participation (Agarwal 2001; Cooke and Kothari 2001; Cornwall 2002; Campbell and Vainio-Matilla 2003; Cornwall 2003). This limitation, that Agarwal (2001) calls "participatory exclusions" are a symptomatic problem of regularized institutions (like committees or self-help groups), which results in deficiencies to instill democratic norms and give voice to the otherwise silenced or excluded.

Frequently, this happens because implementing agencies assume that communities are homogeneous entities (Agrawal and Gibson 2001), with similar interests and opportunities to voice their needs; and therefore newly created

institutions will respond to 'the whole community'. The vision of mythic community (Agarwal 2001) prevent development and conservation projects to attend to differences within communities.

Agarwal (2001) argues that different actors with multiple interests constitute communities; recognizing those actors and the processes through they interrelate (official and unofficial institutions) are crucial for enhancing participation and the recognition of silent voices.

For Lefebvre (in Cornwall, 2002), one of the reasons why some groups are excluded is that officialized or newly created spaces for participation exist alongside unofficial spaces and the spaces of everyday life. This author argues that these spaces are not separable, what happens in one impinges on what happens in the others, as relations of power within and across them are constantly reconfigured. In this sense, attitudes towards excluded groups, like women, are not faded away by the use of a participatory technique. It is very likely that existing institutions and relations of power are replicated within new created spaces like committees or consultations, limiting the agency and involvement of people without confidence, familiarity or status (Cornwall, 2002)

Participatory approaches often promote reaching consensus for decision-making, nonetheless there exists the concern around exclusions of gender and age because 'community' consensus or notions of 'common' interest could exclude dissenting perspectives of less powerful groups or individuals (Cornwall 2003). As Cornwall (2002) mentions, these concerns, among others, are very

important to consider when examining the nature of the spaces that are created for participation.

In several projects, like Joint Forest Management implemented in India, the local committees created to manage the forests usually lack women as members, and in the cases where they are members, they have little say in the decision-making process. Agarwal (2001) has documented this case in detail and one conclusion is that social rules define the committees' internal rules; these rules prevent women secure access to many resources (because property rights are vested in men), because they are not considered as resource users (although it is documented by Agarwal (2001) that they are active users).

This example, just as many others, suggests that if meaningful participation is to be achieved in development and conservation projects, its focus should be on the divergent interests of multiple actors within communities, the processes through which these interests emerge and through which various actors interact with each other, and the institutions that influence the outcomes of political processes.

One aspect of being inclusive is the problem definition. Who defines the problem that conservation and development projects must address affects the program success. Usually conservation and development projects define the problem and the objectives without local participation. But when trying to participate, local communities face numerous constraints because the problem may not make sense to them.

Sharing problem identification does not merely mean eliciting dialogue from local villagers, but includes the extent to which local NGOs groups participate in the definition of the problem and the degree to which the problem has been translated into terms or situations that have relevance to the local community (Little 1994). To achieve this, it will be important to revise the techniques that are used to define the problem. Little (1994) suggests that in depth studies are needed to determine the right questions when asking people about the environmental problems in their local settings. Also, the presence of one or more local organizations capable of channeling and representing the opinions and inputs of different local communities' groups is crucial for engaging in dialogue with other actors and for a more active involvement of people from local communities in the decision-making process on their lands.

The sustainability of a conservation and development project depends in a large extent on local people's internalization of the environmental problems in their surroundings. For some authors, conservation projects' success will largely be affected in the extent to which the people who are supposed to benefit from (or are affected by) the program have a voice in deciding the content, the objectives and the methods used by the system (Axinn and Axinn 1997; Cooke and Kothari 2001; Jeanrenaud 2002). But also, incorporating those in powerless positions is also seen as a social justice right, which acknowledges that those who are bearing the costs of conservation actions should have a voice and decision power on the defining these actions and policies.

Summary: Theoretical Issues and Research Questions

The issues raised in this chapter will guide the analysis of the Osa Biological Corridor project implementation, for this reason this section summarizes the main issues discussed in this chapter and links them with the thesis research questions.

This Chapter starts with the discussion of biological corridors approach, which came as a response to the weaknesses of the protected areas model to prevent different species extinction. The main function of biological corridors is to connect protected areas using land fragments, to increase the mobility and maintain a heterogeneous ecosystem. Although there is debate regarding the effectiveness of this strategy, the MBC and Osa BC embraced this concept but redefined it to incorporate social and economic objectives, including the promotion of local participation. These elements make this strategy resemble the ICDP model. Framing the Osa BC strategy as an ICDP helps to analyze the first research question in Chapter 5, which deals with the identification of the Osa BC strategy, and its limiting factors.

The implementation of ICDPs has been influenced by different discourses. These discourses affect the project's responses to different issues like: what is more important for a project to achieve, biodiversity protection or sustainable development and people's well-being? Who defines the problem? Whose interests count when defining what to do in the project? Should the project seek to achieve meaningful participation? Or should they pay for conservation and simplify the project's participatory approaches? The perspectives and worldviews

described in this Chapter are used in Chapter 5 to deal with the another research question, that deals with who are participating in the Osa BC, their interests and the implications of these discourses in the definition of the strategy.

ICDPs have been criticized for their apparent failures to achieve both biodiversity conservation and promote sustainable development. Besides the intrinsic complexities of this type of projects, there are several obstacles that prevent the intended beneficiaries to get benefited from the project and for the project to promote sustainable uses of natural resources. This Chapter reviews several obstacles to achieve biodiversity conservation and sustainable development, the description of these obstacles helps in the discussion of the Osa BC strategy in Chapter 5, and to frame the main limitations that the interviewees identified for conservation actions in Osa Peninsula. This Chapter discussed direct compensation approaches to conservation as an alternative to deal with some of the limitations of ICDPs. The discussion of this approach is also important for the discussion of the Osa BC strategy, since this project is relying on payments for environmental services as the main alternative to achieve the project's objectives; this Chapter discusses several limitations for this project to distribute benefits in an equitable way, which are important point to take into account in Chapter 5.

This research assumes that achieving meaningful participation is crucial to achieve ICDPs objectives and deal with the inherent complexity of this type of projects. This Chapter reviews the concept of participation that is practiced in conservation projects, emphasizing that participation is not a fix state but varies

in a continuum; therefore there are different levels of participation in which projects practice participation. The conceptualization of participation and the levels of participation are used in Chapter 6 to address a third research questions, that deal with the description and analysis of the Osa BC participatory approach.

This Chapter finishes with a review of the challenges to achieve meaningful participation. One limitation of ICDPs is that their objectives are tied with the protected areas approach; so, for many conservationists, participation implies convince people to agree with the nature protection objectives. Also, conservation projects usually overlook marginalized groups within communities, which can have different interests and opportunities to voice their needs. Women, the poor, the elder, can be examples of marginalized groups; recognizing those groups is important for the participatory approach design, and also, to define the project's problem. Land tenure security affects people's opportunities to participate; people are powerless to request spaces of participation and voice their needs, and also, a project may be less willing to negotiate conservation actions with them. These challenges and limitations to participation are used in Chapter 6 to address a fourth research question that deals with the identification of factors that prevent meaningful participation.

CHAPTER 4 METHODS AND ANALYSIS

Several authors (Berkes 2004; Campbell and Vainio-Matilla 2003; Cleaver 2002; Cornwall 2003) have pointed out that implementation of participatory approaches, especially in conservation and development projects, has not been well documented. In its review of several ICDPs, Wells and Brandon (1993) criticized that almost none of them stated what participation means nor how they expected participation to reduce threats to protected areas. A decade after the Wells and Brandon review, Campbell et al (2003) argues that this trend continues in ICDPs and community-based conservation projects.

The MBC is now considered a platform to promote the sustainable development model in the region. Improving Mesoamerican's quality of life has become one of the project's main objectives, just like maintaining environmental quality and protecting the immense biodiversity richness of the area. Because of this, Miller et al (2001) proposed that one of the challenges for the MBC is to enable civil society participation and reconcile the many stakeholders' interests. How will the MBC face this challenge? Since it is a complex multi-national project and is now in its phase of preparation for implementation, it is not possible for the scope of this thesis to analyze the MBC as a whole. That is why I have chosen to focus in only one biological corridor (Osa BC). Addressing these issues for the Osa BC will be directly relevant for the implementation of the MBC.

Research Design and Site

The reasons for choosing the Osa Biological Corridor to carry out my research project are; one, because it is part of the Mesoamerican Biological Corridor and it is located in an area whose biological richness makes it of great importance for conservation purposes in Central America. This biological corridor is also relatively new (started on 2000), it is not very well-known and certainly not many analyses have been carried out on it.

I used a case study approach to explore the participatory approach of this project and analyze the mode of participation that the Osa Biological Corridor is promoting, and if this could enhance sustainable development of the region.

Case studies strive to understand what can be learned from a single case more than generalizing beyond the case. Putting boundaries around the case allows the reader to create a frame, understanding that changing one of the boundaries, such as the actors, time or location, could deeply influence the outcomes (Ishida 1999). It is important then to specify that the analysis of this case study and its results cannot be generalized to the whole MBC project but can be used as complementary information in future project's analysis.

An important part of the case study is to establish a theoretical framework that inform the research questions and will guide the analysis of the different sources of information. For this research, the theoretical framework was outlined in Chapter 3. Case studies are flexible in the sources and methods that are used to obtain the evidence, so information from interviews and documentation can be used to develop a case study (Yin 1998). This research used open-ended

interviews with key informants. I have also relied on project's documents that were made available by the key informants or I gathered from different sources (internet, libraries)

Reflexivity and Context

Feminist research has several characteristics that most feminist epistemologies share and that I found useful for this research project. Among those characteristics are: reflexivity and context (Denzin and Ivonna 2003; Ramazanoglu and Holland 2002).

Being reflexive can help us unmask our own positionality when carrying out research. Our position (insider, outsider[36], outsider-within[37], ethnicity, gender, age, religion, and others) affect how we see, listen and understand the world; and also the impacts of the researcher on the participants and visa-versa. Feminists scholars have emphasized the importance of beign aware of our position because that affects what are we going to ask and how in interviews, and in understanding the research participants points of view. Being reflexive of our own positionality can shed light in understanding the differences in ideas and perspectives between researcher and participants; and also being aware of the power relation between the researcher and the interviewee. Naples (1996) mentioned that 'no matter what kinds of participatory processes we employ, the

[36] Insiders and outsiders refer to the cultural position of the researcher regarding the interviewees. An insider will be a researcher who is studying its own culture, or social group, and has even referred to women studying women. Outsider, as the word implies, is the opposite as insider.

[37] Outsider-within is mentioned by Naples (1996), she argues that there is no fixed outsider – insider position but they are ever changing. A person from one social setting might feel sometimes that is outsider, or an "outsider" that become very acquainted with the social setting he/she is at might feel as insider sometimes.

researcher still retains control over the decisions regarding who benefits from the research, who controls the dissemination of findings and who determines the particular processes chose for the research".

Reflexivity is important then, to be aware of not over-generalizing the research findings, have a humble attitude by recognizing that we as researchers can introduce biases, different meanings and points of view that affect what we understand and conclude.

My own positionality has affected why I decided to study the Osa BC. I am interested in this area because I worked in Osa Peninsula for three years, so I am aware about the socioeconomic and political situation of the area, nonetheless, this does not imply that I know or understand the local politics. I have seen the challenges not only that local people face in their daily lives. I have also seen how difficult it is for outsiders, like me, to enter in, and be able to understand all the hidden local agendas. I feel a personal commitment to contribute with something to change how projects and policies are implemented in this beautiful and impoverish area.

Being context specific is a characteristic of case studies too, and as mentioned below, putting boundaries on the research prevent to generalizing and give the researcher and reader a frame to help understanding the phenomena that is been studied.

Carrying out Interviews

Some suggestions made by feminist scholars (Anderson 1991) are: listen critically to the interviews; to the researchers responses and questions; hear what the interviewee implied, suggested and started to say but didn't; and interpret interviewee's pauses and unwillingness or inability to respond.

Anderson (1991) mentions that one thing that conventional interviews avoid is the exchanging of information between interviewers and interviewee; the rationale is that researchers can avoid influence the interviewee responds by not responding to interviewees' questions. Nevertheless, feminist scholars (Oakley 1981) found useful to answer back and give her personal information, because it helped to build rapport during the subsequent interview process.

During my interviewing process I found myself in the situation of interviewees requesting me information; although it was only once I found useful to be confident to answer back and not try to impose a hierarchical and inflexible relation between the interviewee and myself.

Methods of Data Collection and Analysis

Data Collection:

The first step for this research was to carry out an exploratory research[38] to identify the stakeholders involved in the Osa Biological Corridor, and the representatives of the Mesoamerican Biological Corridor in Costa Rica. To do

[38] Field research was approved by the MSU University Committee on Research Involving Human Subjects, IRB # 03-411

this I relied on information given by contacts and friend that I have due to my previous work in that area.

I spent in total 15 weeks in the field. During June and July 2003 I conducted open-ended interviews with these first contacts, which provided me with a larger list of people involved in this project, which I categorized in different groups:

- Technical Coalition (6 NGOs)
- Environmental Ministry – ACOSA
- Donors Coalition
- Local Committee
- MBC national office
- MBC regional office

I conducted an open-ended interview with a representative of each group, the numbers of interviewees were as follow: 4 of the Technical Coalition; 1 of Environmental Ministry; 1 of Donors; 1 of Local Committee; 1 of MBC national office and 1 of MBC regional office. I generally asked about what is this project about, how it started, who is participating and some general remarks; trying to be very flexible in the interview process to allow interesting topics to come up. Interviewees often expanded to include their personal involvement, how they view the participation of other organizations, implementation problems and how they see this project framed on a wider effort for conservation.

As a follow up, during December 2003 and January 2004 I conducted a second interview with the participants, nonetheless, I added other participants to the list, since in the first round of interviews I was not able to access more

members of the Local Committee and of the Environmental Ministry; and since the focus of the second interview was on the Osa BC, I did not interview again the members of the MBC regional project. The numbers of interviewees were as follow: 4 – Technical Coalition; 2 – Environmental Ministry; 1 – Donors; 5 – Local Committee.

These interviews were based on the information given in the first interviews. I expanded the topics and themes that were discussed on the first interview but focused on the way different actors participate in the project, how decisions are taken, how local people participate, and in general, a description of this project's participatory approach.

The follow-up interviews were semi-structured; I used information from Campbell, et al (2003) to frame the questions in themes. Campbell et al (2003) mentioned several aspects of participatory approaches that are weak on conservation and development projects, (I include these in Chapter 3); therefore I decided to ask their opinion on those aspects. Specifically, I asked about the degree of participation of local communities or intended beneficiaries in the decision-making of the project. Second, I wanted to identify whether the project's end objectives are tied to the protectionist approach. Third, I wanted to identify how representative to the local interests are the organizations working in the project, specifically to women's and other marginalized groups' interests. Also the relationship and different interests and discourses of the organizations and individuals involved. Another aspects considered during these interviews were the knowledge and awareness of the NGOs of the local socioeconomic context.

Data Analysis:

The first step involves focusing the analysis, there are two ways to do this: analyzing the answers by themes or by individual or group (Taylor-Powell and Renner 2003). Since I designed the interviews using themes from the literature, I decided to do the analysis of the interviewees' responses by topic.

I recorded all the interviews, so I listened to them twice and transcribed the responses. I started the process of writing down the information after each interview to ensure that I would capture the person's ideas. The second time I listened to them was before starting the coding process. I did not transcribe them word-by-word because I decided that it was not necessary since the interviews are in Spanish and the analysis is in English. Therefore I use my own words anyway in the analysis.

As mentioned above, I did two rounds of interviews. I used the information of the first round to design the interview guide for the second round, and also in the final analysis. Since my analysis was based on the topics, and the period of time between the interviews was not significant (not in statistical sense but in the sense of meaning) I decided to unify the responses of the first and second round.

After having all the interviews in paper, the following step was to identify the topics or categories for the coding process. There are two ways to define the topics: the researcher can define them beforehand and then scan the interviews to see if there is information within the interviews about those categories. The other method, which I used, involves reading the material to find the themes that recur in the data (Rubin and Rubin 1995; Taylor-Powell and Renner 2003). I read

the interviews several times and made a list of different topics and concepts that emerged from the interviews. The topics and each code are presented in Table C.1 (Appendix C).

Coding involves grouping interviewee's responses into categories that bring together the similar ideas, concepts or themes (Rubin and Rubin 1995). I scanned each interview and marked the paragraphs or ideas that referred to any of the identified topics. Sometimes, one paragraph had information of different topics, but that was not a problem since it is possible to assign different codes to a same text. To facilitate the coding process, I used the software Ethnograph V5. The software was very useful identifying the all the interviewee's responses on each topic and among topics; and helps in the analysis across interviewees by topic and between topics (Taylor-Powell and Renner 2003).

After coding, I took each research question and decided, based on my knowledge of the interviews content, which codes would inform and give answers to the question. I scan all the codes related to each question and found that I had too much information for each question, and I had hard time to make sense and find relationships between all the pieces of information together. I was able to confirm that it is important to guide the analysis of the findings; to do that I used several analytical or operational issues from literature (which are mentioned in Chapter 3).

The process of linking the coding back to the analytical issues was challenging. I had to read several times information of each topic to understand the links with the concepts and ideas that I obtained with the literature review.

With these issues I framed the interviewees' responses according to each research question. I read the information pertaining to each research question and identified which of those analytical issues were reflected on the interviewees' responses. If needed, I added other codes to the analysis of the issues, and went back and forth between themes and across actors to get the sense of the people's ideas. The links between the research questions, the analytical issues and the topics from the interviews are outlined in Table C.2 (Appendix C). As it is shown in that table, I used groups of codes to identify patterns and connections within and between the operational issues; and I used several codes repeatedly, because in several cases they contained information about different issues.

One important decision I had to make was how to identify the interviewees' quotes in the analysis. I decided to give fictitious names to each interviewee, but, I usually identified the affiliation or organization the interviewee belongs in order to help the reader to have a sense where are the ideas coming from.

After reviewing all research questions and analytical issues, it was important to check some information and reinforce some arguments using project's documents, like the report of the first meeting of the Technical Coalition, the final report for the first phase of the project, the second phase proposals and operational plan, the workshop report of the Local Committee establishment and several meetings minutes. Also, I used documents about the conceptualization, planning and challenges of the Mesoamerican Biological Corridor, the regional project and the Costa Rican chapter.

Findings were obtained through the identification of connections among the topics in relation of each analytical issue, and my own reflections and interpretations about those ideas.

Limitations of this Case Study

This is an exploratory research, for this reason it does not intend to provide an evaluation of the Osa BC performance. There were probably several actors that I did not interview and therefore this analysis does not pretend to be exhaustive[39]. The intention has been to describe aspects of this project's strategy that are relevant for local communities' participation, and to raise questions about possible limitations of the project.

About the methods, I mostly relied on one-on-one open-ended interviews and literature review for the analysis of the aspects of the Osa BC that this research focused. It could have been advisable to use other type of methods to strengthen the validity of the information presented. I think focus groups, especially with the Local Committee would have helped this research.

[39] Recently TNC started a process to identify different stakeholders and better ways to work together.

CHAPTER 5: BIODIVERSITY CONSERVATION AND SUSTAINABLE DEVELOPMENT: EVIDENCE FROM THE OSA BIOLOGICAL CORRIDOR PROJECT

This Chapter contains the analysis of the two research questions that deal with the identification of the perspectives and interests of the organizations that decided to unify efforts to deal with the perceived obstacles, in order to promote conservation and sustainable development in Osa Peninsula; and the implications of their different perspectives in defining the Osa Biological Corridor strategy. It also explores the strategy defined by those actors, along with the benefits and outcomes of the project's activities.

Multiple Actors, Multiple Perspectives: Defining the Osa Biological Corridor

The idea to start a biological corridor project is the result of a discussion process that started with a workshop organized by The Nature Conservancy (TNC) and the fundraiser campaign for the Osa Conservation Area (ACOSA). Different organizations working in the Osa Peninsula sat together and discussed what was affecting the Osa Peninsula and what they should do. These organizations realized that they should focus their efforts on the *Corcovado* and *Piedras Blancas* National Park's buffer zones; the biological corridor concept provided them with the logical framework to do so. They also realized their limitations as NGOs in overcoming Osa Peninsula obstacles to conservation.

The actors involved in Osa BC were identified in Chapter 2 as: the Technical Coalition, the Government, the Local Committee and the Donors. This section attempts to identify which could be the different discourses of the Osa BC

stakeholders, because, as Jeanrenaud (2002) argues, conservation and development projects' design are increasingly influenced by different perspectives and worldviews. Each perspective will affect the preponderant objective, if different objectives like achieving conservation and development are equivalent, and how local participation will be considered.

Jeanrenaud (2002) identified three main discourses within conservation organizations, regarding how they perceive the relationship with humans and nature, which are: cosmocentric/ecocentric and anthropocentric elites (people can be a threat to nature), anthropocentric neo-liberals (people can't be ignored, people are a resource), radical anthropocentrics (emphasis on human rights issues in natural resource management) (See Chapter 3 for more details).

During my interviews, I asked the participants about the motives of their organization's participation, their interests and the main objective of the Osa BC project; I validated this information with a stakeholder analysis that the project carried out before the implementation started (CBO 2000), and the participants profiles (Chapter 2). This next section uses Jeanrenaud's identification of conservation discourses to discuss and assess their responses.

Perspectives within the Technical Coalition and Donors

Several organizations that now comprise the Technical Coalition initiated this project. They are interested and knowledgeable about the Osa Peninsula since some of them have been working in the area for almost 20 years. All share the following goal: establishing connectivity for the Corcovado National Park. Nevertheless, each has a defined niche of work that is different from the other,

thus there is no duplication of efforts within the coalition (See Chapter 2 for a description of the NGOs and their roles). The NGOs profiles give hints about their discourses, below it is presented which discourses I identified for each organization.

Fundacion Neotropica, and CEDARENA activities and interests show that are more influenced by anthropocentric-neoliberal and cosmocentric-ecocentric perspectives, where the first one seems to be stronger.

INBio, *Fundacion Corcovado*, The Nature Conservancy, *Fundacion CR-USA*, Conservation International and ACOSA seem to have both discourses, nonetheless cosmocentric-ecocentric is stronger than anthropocentric-neoliberal. INBio and ACOSA also present the protectionist discourse, nonetheless this one was more subtle.

Lastly, *Fundacion TUVA* and *Fundación Cecropia* seem to be more influenced by radical anthropocentric discourse, although their activities were also influenced by the cosmocentric-ecocentric discourse.

Although the vision and mission statements can give an idea of what could be the organization's predominant discourses, each person has a particular worldview that may or may not concur with the organization. Some interviewees' positions differed somehow with their organization discourse; one example is a governmental official who showed more similarities with radical anthropocentric views. Most likely, those in power define what will be the organization discourse

It was interesting to see that most of the NGOs and Donor representatives shared similar interests and ideas[40]. Connectivity for Corcovado National Park was the main objective mentioned. All were concerned about the type of development to be promoted in Osa Peninsula since this area is very important in biological terms. One interviewee from this group said that its high endemism and biodiversity richness can justify absolute protection measures in this area. Nonetheless, he agreed that this is not the best way to proceed. He also agreed with the rest of the interviewees that it is best to have local communities as partners in order to find ways to use biodiversity for economic sustainability.

Overall, cosmocentric – ecocentric seems to be the predominant discourse for these groups. I was expecting that the Donors were influenced by the anthropocentric neo-liberals discourse, but in this case the interviewees from this group have also been involved in field activities, that could be a reason why they framed the project's objectives and their role in the local level, and not in a regional or global level, as can be expected from international donor agencies. There was only one national-based NGO that put the Osa BC in the Mesoamerican regional perspective. This was possibly because the organization is large which helps them frame their agenda in a wider perspective. Nonetheless, their objectives and motifs are definitely within the cosmocentric-ecocentric discourse.

[40] *Fundacion TUVA* and *Fundacion Cecropia* discourses are the ones that apparently differ more from the rest, and it is interesting to see that they also have been more separated from the rest; *Fundacion TUVA* have not been active in the process and *Fundacion Cecropia*, although was active during the first phase, they left the process.

Perspectives of Local Communities Representatives

Local communities' organizations, leaders and individuals in general are also important actors for the project. Some people in the Osa Peninsula are very critical about conservation actions, and some punish those residents who are "conservationists" (locals who have adopted the cosmocentric-ecocentric discourse). For example, some members of COVIRENAS (Natural Resources Vigilant Committees), who voluntarily monitor and denounce illegal logging and hunting, have a difficult time finding jobs in the area.

Although not everyone in the Peninsula is anti conservationist, there is a group that often tries to disrupt the initiatives and projects that start in Osa Peninsula; that is why the Coalition decided to work only with those who support the Coalition and the project.

The representatives of the local communities on the project (the Local Committee), all live in the Osa Peninsula. Several of them acknowledged their personal interests in the project. One interviewee, e.g., said that all of his family's property was contained within the Osa BC, and therefore felt that only by being a part of the project would he and his family be able to benefit. Another interviewee mentioned that he is interested in tourism activities as an additional source of income, which is why he wanted to see if the project could help him start such an activity.

Local Committee interviewees agreed that conservation actions are important for the Osa Peninsula, but they see the main objective of conservation projects as bringing development alternatives to the local communities rather

than for protecting biodiversity per se. They mentioned that at the beginning they had problems with members of the Technical Coalition, probably because their worldviews were very different, and they were seeking different objectives. One interviewee mentioned that two organizations within the Technical Coalition wanted the Golfo Dulce Forest Reserve (GDFR) residents to leave, and were willing to impose restrictions on natural resource use. Radical anthropocentrics seems the closest discourse that describes the perspective of the Local Committee members.

Perspectives within ACOSA

Government interviewees reflected a range of perspectives. They work in ACOSA, and agree on the importance of a better management of ACOSA's protected areas. Nonetheless, one interviewee who has a higher leadership position, advocates strengthening the protected areas including the GDFR. He thinks that MINAE – ACOSA has a leading role in GDFR and considers that support by local people for the government decisions is important. He does not agree completely with the idea of establishing a biological corridor within the GDFR since it could complicate the Reserve's management. Because of his emphasis on strengthening the protected areas model, it seems that this person uses the anthropocentric elite discourse. Another interviewee within ACOSA however, framed the project and their role in a different way. Although he believes that it is important to strengthen conservation actions, he also said that the government has to work with the communities within GDFR, giving them more decision-making power. This person works sometimes closely with local

communities, and consequently his discourse resembles that of radical anthropocentrists. Governmental representatives from ACOSA have a very important role within the Osa BC, but their participation in the project to date has been very passive.

Implications of Different Perspectives

The different perspectives of each organization most likely affected the work of the Coalition at the beginning, and the incorporation of different actors like the government and representatives of local communities. Maria Arias, from INBio, acknowledged how difficult it was to become acquainted with working together. It has taken time to arrive at common understanding; they share the same interest to protect the Osa Peninsula's forests, but they differ in what is the most important problem to overcome in Osa Peninsula, its underdevelopment or the threats to its biodiversity. So far, the perspectives and interests of the Technical Coalition have prevailed in the definition of the project's objectives and strategy.

Definition of the Problem

The actors mentioned above have in different ways influenced the project's goals and objectives. The Technical Coalition organizations identified what they consider the most important problems for conservation actions in Osa Peninsula, based on those problems they defined the project strategy. Nonetheless, it is important to mention that during the interviews, members of the Local Committee and the Government agreed with the Technical Coalition in identifying the following obstacles for protect Osa Peninsula resources in the buffer zone:

conflictive history, confusing land tenure situation and lack of development alternatives.

Conflictive History: Implications on Support for Conservation

The conflictive government policies, companies and NGOs actions along with their histories have provoked hostile reactions of many people in Osa Peninsula against any outside-led initiatives. Local communities in this area have openly expressed their opposition about conservation actions (CEDARENA 2001).

The contradictory government policies over time have been what people resented the most. Before the establishment of protected areas in the mid 1970s, the Government promoted clearing of forests, not only for large scale activities such as banana production and timber extraction, but also in small scale production, as part of the process to secure property rights over the land. If land did not have pastures or crops, settlers could lose their right to use it. The establishment of protected areas aggravated people's use of land, especially in GDFR. Successive expropriations and land use regulations have provoked an environment of uncertainty.

According to members of the Local Committee and the Technical Coalition, locals fear that this project is going to do the same as what the government did almost 30 years ago, impose natural resources' use restrictions and establish protected areas. Lynagh (2002) argues that local fears to conservation actions are often the result of the disconnection between the local people living in the buffer zone and the conservation projects.

Their distrust on the governments' policies and NGOs actions make people suspicion about the project. An interviewee from the Local Committee mentioned that SIPRAICO (peasants union) has largely promoted in the area the idea that participating in the Osa BC could limit peasants possibilities to expropriation compensation. In his case, Leopoldo Zamora, an Osa Peninsula resident, knows that being part of the project does not impose any limitation. But at the same time, he understands local people's concerns, because he experienced the harsh Government action when expropriating people of Corcovado NP lands. He had a plot within what is now the national park. He owned a wood house, a well and other '*mejoras*' (improvements), also domestic animals like pigs, chickens, etc. One day when he and his family came back from working in a field, government officials had burned their house, killed their animals and told him that they had to leave the plot. The government paid for part of the *mejoras*, but the payment was less than what he had invested. They were relocated to another plot where the family started all over again.

I was amazed hearing this story and asked the interviewee why he supports conservation actions. He said that he knows the importance of the forest, to have water and better health; and that regulations are needed because if not, outside loggers will clear out entire forests. Nonetheless, he said, there are many others in Osa Peninsula that do not recognize the importance of the forest and the benefits of being near Corcovado NP, which is recognized worldwide[41].

[41] I wanted to add that indeed Corcovado NP is very well-known. I visited a branch office of STA travel agency in East Lansing, Michigan; this agency is located all over U.S. and I was impressed that one of the main Spring Break tours is a tour to Corcovado NP.

Confusing Land Tenure Situation: Effect on Pressures over Natural Resources

There are four types of property rights: private, common, state and open access[42]. In the context of the area where Osa BC has focused its efforts, it is possible to find land on all these types of rights except communal land[43].

Golfo Dulce Forest Reserve constitutes a large part of the Osa BC buffer zone, and, as an interviewee from the MBC Regional Office mentioned, it is the most conflictive protected area of ACOSA and one of the most disputed in the country. The history of the establishment of this Reserve and the land tenure conflict makes its management very challenging.

The uncertain tenure system in Osa Peninsula is largely an outcome of Costa Rica's government development and protectionist policies. Now, the land tenure situation in this area is so complex that only with political will and a lot of patience can it be resolved.

Osa Peninsula settlers have had a lot of difficulties in securing ownership, and the right to use the land. Land titles are a requirement for the government's recognition of their ownership; nonetheless, registration costs and subsequent taxes payments are prohibitively expensive, especially for people who came as squatters and have been engaged primarily in household level production, hunting and gold mining. Because the government is less willing to compensate those without a land title, not having one adversely affects them, especially after the establishment of protected areas.

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[42] Situations in which no property rights or no rules limiting access have been defined (Lynch et al, 1994)

[43] Although Guaymi Reserve is held under communal regime, it is out of the scope of this thesis to analyze the situation of this Reserve.

The Agrarian Development Institute (IDA) usually is in charge of titling the lands for low-income settlers. But since the government declared the Corcovado buffer area as a State owned Reserve, IDA has not been able to provide this service to the people living there.

"Confused" and "uncertain" are the best adjectives to describe the GDFR situation. Peasants are confused about the rights of their tenure. A member of the Technical Coalition thinks that, besides the social repercussions affecting people's well-being, land tenure insecurity has generated pressures on the natural resources.

Mario Lara, from the Technical Coalition, mentioned that several new studies have shown that the biological corridor area is very fragmented. All interviewees agreed that illegal and legal logging in primary forests is the biggest threat for Osa Peninsula's forests.

Loggers are very powerful in the area and local institutions are too weak to prevent the clearing of forests. "Land tenure insecurity in GDFR aggravates the logging problem," said Felipe Lopez, from the Local Committee. People are reluctant to protect nature or invest in the plots because they fear they will be relocated and will lose what they have done. Most people prefer, then, to sell the trees in their plots to the loggers, who usually are outsiders. Loggers often pay very low prices to the peasants, taking advantage of those who have no legal tenure and therefore cannot bargain for better prices.

Illegal hunting is another important problem for Corcovado NP and its buffer zone that could be worsened because of the confusing land tenure situation.

Several articles (Loaiza 2004; Parrales 2004) from the most well-known newspaper in Costa Rica have denounced the severity of this problem. Apparently outsider sport hunters who come in groups are killing important numbers of *chanchos de monte*[44] and jaguars, Osa Peninsula COVIRENAS have denounced this, but MINAE has not done much about it. Just like logging, if people do not feel it is theirs, they have less incentive to protect the resources.

Lack of Development Alternatives

People living in Osa Peninsula confront many constraints to carry out productive activities. They cannot access credit from Banks because of the legal regulations on land use and/or their legal tenure status. Worse, peasants have not received compensation for all the regulations of being a Reserve. Their alternative has been to migrate and become landless and poorer. One interviewee mentioned that most peasants have no choice but to leave because this land is not good for agriculture. Logging is one of the most productive alternatives, but it is banned. Therefore, people do not have many development alternatives, so leaving seems a better option.

Lynagh et al (2002) points out that the costs people in buffer zones face are usually very high. Buffer zones serve as transitional areas within which land uses are managed to reduce and control interzone impacts. This means that people living in these areas must deal with restrictions on the use of natural resources and sometimes with the negative effects from productive areas (e.g. pesticides from crops) and damage by wild animals.

[44] Wild pigs, they are also called pecaris.

Several interviewees argued that the Osa Peninsula has few development alternatives. The existing socio-economic situation, conflicted history and poor soils and limited productive capacity of Osa Peninsula lands makes it very difficult for any project to succeed in promoting sustainable development in the area. The two alternatives that have been considered are eco-tourism and giving monetary incentives for forest protection. Nonetheless, it is not clear yet if these activities will distribute benefits equitably.

Mario Lara, from the Technical Coalition, argues that local people are willing to protect nature; otherwise it is not possible to explain why there are still forests in the Peninsula. But they also want the government to let them have crops and cattle and to create an income to survive. In general, most agree that if people benefit from conservation actions they will collaborate and get involved.

Integrated Conservation and Development Strategy of Osa BC

During the first meetings of the project, the organizations of the Technical Coalition concurred that prior to working as a Technical Coalition, they had never tried to unify efforts, share information and resources to deal with the above problems. The conceptualization of the MBC as promoting strategic partnerships with key stakeholders to build a support framework and to coordinate activities in the field (Miller, Chang et al. 2001), helped to shape the logical framework for the Osa BC.

The Technical Coalition conceptualizes a biological corridor as a way of planning land use to connect two protected areas with communities' participation and the promotion of sustainable productive activities to help the connectivity of

both areas. There will be different degrees of regulations on natural resource use in buffer zones, as well as bounded protected areas and zones for productive activities; "the ideal is to have sites where biodiversity can flow" (Laura Mena interview).

It could be expected that the MBC project influences the conceptualization and strategy of the Osa BC, since this one is at least in theory part of the regional initiative. One problem, as Clara Zeledon mentioned, is that local projects do not have the regional perspective, and tend to be too local. In Costa Rica, there is no national project that brings together the local initiatives, so biological corridors remain in the micro level. Lacking a regional perspective has in some sense determined that the Osa BC and the MBC have a weak relationship. Probably, this is the reason why the MBC has provided limited funding and support to Osa BC. So far, the MBC Regional Office in Costa Rica has helped them with small grants for educational materials and facilitated information exchanges among different biological corridors' initiative. Their relation has made Osa BC independent and even if the MBC project fails and is not implemented, they will be able to continue.

Osa BC Objectives. According to the Osa BC project's documents (CBO 2001), (Arias 2002) and the interviews I undertook, the main objectives of the Osa Biological Corridor are to build the connectivity between Corcovado and Piedras Blancas National Parks and also promote the improvement of quality of life in the surrounding communities.

Activities in the Buffer Zone

The strategy that the project has followed resembles an ICDP strategy. There are core areas (*Corcovado* and *Piedras Blancas* NP) in which the project does not have much involvement since these are State owned areas. In between them there are buffer zones where the project focuses its efforts.

The project has been through two phases. During the first phase the project did not implement activities that involved local communities because they considered it more important to undertake technical studies to use as a foundation for the project implementation.

So, one part of the first phase strategy was to support studies to prioritize the areas that will constitute the biological corridor, the tenure situation of those lands and the type of activities that can be promoted. The project has emphasized an understanding of the land tenure situation specifically within the *Golfo Dulce* Forest Reserve (GDFR).

Another important part of the project's strategy has been to consolidate the Technical Coalition, and give the organizations the opportunity to share their information and efforts. The assumption is that if the Technical Coalition is functioning, it will be easier for the conservation efforts in Osa Peninsula to move in the same direction, and thereby enhance the effectiveness of each organization's efforts. Creating the Technical Coalition has been a way to promote trusting relations among the NGOs.

Although no interviewee or project document questioned a possible incompatibility between achieving conservation and development actions

together, as has been suggested by critics of ICDPs; the project participants agreed during the first phase to focus on establishing the basis for biodiversity conservation activities and considered as less important the socio-economic and outreach activities.

The only activity related to the promotion of sustainable development in Osa Peninsula was a study to analyze productive projects that had taken place in the Peninsula. The study was supposed to identify the reasons for their failure or success, and provide recommendations for productive activities (mainly agricultural) to be promoted in the area, including the possibilities for opening a market for locally produced food. *Fundacion Cecropia*, a small NGO based in Osa Peninsula that was part of the Technical Coalition, was in charge of this study. They left the Coalition and were not able to finish the study.

Dealing with the Land Tenure Situation. The Technical Coalition decided that the first step in dealing with this problem was to clarify the land tenure situation. They carried out a study that verified the boundaries and legal situation of approximately 30,000 hectares (75% of the first part of the Osa BC). They were able to confirm that 86% of the parcels do not present boundary conflicts with what is reported in official databases. Nonetheless, only 33.44% of the total properties have legal tenure. The remaining percentage presented different degrees of inconsistency (CBO 2001).

The land tenure study is trying to help the government to consolidate the GDFR and define a management plan that includes the objectives of the biological corridor.

Dealing with Local People's Concerns. The Technical Coalition strategy to deal with local fears and concerns about conservation actions is to clarify and inform the project's objectives every time they can. Mario Torres (a donor's representative) argued that informing people is the best strategy; the project has organized meetings and issued bulletins with information about what a biological corridor is. Members of the Local Committee agreed that meetings have been the main way for the project to deal with local concerns; this Committee has organized several meetings when they discuss the project and other Osa Peninsula happenings with the people. Sometimes they receive information and other types of support from the Technical Coalition to continue their work.

Dealing with a Lack of Development Alternatives. During phase1, Osa BC did not undertake development activities. In phase 2, the activities and each NGO's role will continue as they were in phase 1, except for *Fundacion Neotropica* that will be working more closely with the local communities in productive related activities. *Fundacion Neotropica* is in charge of implementing the sub-project called "Conservation of Biodiversity and Sustainable Production in the Osa BC", in which the Local Committee is actively involved. This sub-project objective is to bring more benefits to local communities. It will combine productive activities with reforestation and restoration activities, which will help to overcome the criticism from protectionists that focusing in productive activities will undermine conservation actions. The project will promote use of biodigestors, and use organic agriculture techniques for different crops. Technicians of *Fundacion*

Neotropica will work with each family to decide which crops and activities will be best in each farm.

The project does not consider measures to incorporate local knowledge on the definition of the productive practices. Mario Lara, from the Technical Coalition, mentioned that the peasants populations with whom they will be working do not really have autoctonous knowledge, since they are migrants from the Central Valley or north part of the country. Members of the Technical Coalition share this perception of lack of local knowledge that is valid for the productive activities.

Another issue is that the Osa Peninsula is not an agriculturally rich area and it has limited access to markets for agricultural produce. This suggests that the sub-project will focus more on household consumption and local market activities with 15 families. The sub-project runs the risk of raising expectations for larger scale agriculture and access to main markets.

Besides those productive activities, Felipe Lopez, from the Local Committee, mentioned that people have not really received substantial benefits, mainly because it is a small project. Jorge Bermudez, also from the Local Committee, agreed and mentioned his hope for Osa Peninsula communities to benefit, but receiving the benefits of the project will depend on their involvement in the project and in the Local Committee.

Promoting conservation of biodiversity and development in Osa Peninsula will not be an easy task. As mentioned before development alternatives for this area are limited; and since this is such an important biodiversity hot spot, NGOs

and donors will try to prevent any activity that will destroy this biodiversity richness. They argue that development activities like mining, banana plantations, African palm plantations, forestry and tourism have not benefited Osa Peninsula residents in an equitable way, and on the contrary have endangered the area's richness of biodiversity. Consequently, many argue that it is better to promote conservation actions by providing direct benefits to local people, through programs like Payment for Environmental Services (PES) scheme.

Approach for Osa BC: PES

The project sees the PES as a win – win situation: local people get paid for their conservation efforts and forest protection is assured. In addition to the payment, the project promotes household scale productive activities that will help to increase food security in the area. Most interviewees mentioned that PES is the development alternative for Osa Peninsula.

Armando Castro, from the Technical Coalition, mentioned that the project has been pressuring the government to give payments for environmental services to local landowners or *parceleros* with no legal tenure and not to 'outsiders'[45]. Because the land tenure study that the project undertook gives reliable proof of the peasants' tenure, the government is accepting informal tenure requirement papers to access the system. It was unfair that people living inside the Reserve, that were the most affected by the regulations, were not eligible to obtain PES, that did not made any sense. Now with only a "*plano*" (map) people can access the system (Mario Lara interview). According to Alberto

[45] People who live in other parts of the country but own land in the area.

Gonzales, people from local communities accept the project better because they are able to access the PES system; nonetheless, the great majority is unaware of the land tenure study and its achievements, even a member of the Local Committee mentioned not knowing about any benefits from the project, not even PES access.

Accepting that people with insecure legal tenure access the system is a step forward to reduce transaction costs for marginalized groups[46], and overcome some of the obstacles mentioned in Chapter 3 that prevent a more equitable system. Also, it gives an alternative income to the people, and helps to reduce the high rate of out migration.

Brandon (2001) criticized PES schemes because they assume that economic incentives and disincentives can be readily defined to achieve biodiversity conservation. She argues that there is little evidence that increasing income may lead to sustainable use of natural resources; she thinks that it is difficult to put a monetary value on nature protection, since different people and cultures value nature in very different ways, so it is not easy to come up with a price for protecting different wildlife species or forests (Brandon, 2001).

It seems that Brandon's criticisms are not yet very strong since direct compensation schemes are being widely promoted (at least in Latin America) as one of the most efficient forms of conservation (FAO 2004; Ferraro 2001; Lendell-Mills and Porras 2002). In Osa Peninsula, for example, where development options have been reduced, receiving any compensatory measure

[46] Transaction costs refer to bureaucratic requirements, like the the legal land tenure, the farm's map and others.

is better than maintaining the present situation; nonetheless, nobody can assure that beneficiaries will not "break the rules" and negatively affect the forest.

Although all the interviewees agreed that promoting PES system in Osa Peninsula (especially GDFR) is one of the best options to protect the area's important resources and benefit local people, the sustainability of the system is considered an important issue that can prevent it to be a viable alternative in the long term. As mentioned in Chapter 3, funding sources for this system have been reduced over the years.

If a market for environmental services cannot be established on a local, national or global level, then it is difficult to predict what other options for funding sources can be used. Also, contracts for forest conservation last five years, and after that period there is no guarantee that the landowner will continue to protect the forest. So it is not clear to what extent this is a good alternative.
The other problem is that this type of strategies prevent that local people get empowered and manage their resources, it is very simplistic in the sense that it assumes that if people get paid they will 'follow the rules', but, whose rules?

Summary

This Chapter reviews how the Osa BC has conceptualized the biological corridor approach to deal with the persistent natural resource management problems of Osa Peninsula. People with different perspectives are defining this project. The preponderant perspective within the Technical Coalition, Donors and Government is the cosmocentric-ecocentric. They see the connectivity between Corcovado and Piedras Blancas NP as the main objective. The main perspective

of the Local Committee's members is more similar to radical anthropocentric discourse, because their main objective is to find ways to help Osa Peninsula residents (including themselves) to overcome their poverty. They have been influenced by the MBC, and in short they have proposed bridging not only geographical areas but also organization efforts.

The organizations of the Technical Coalition have identified the following as the main obstacles to promote conservation and sustainable development in Osa: conflicted history, land tenure insecurity and lack of development activities. These problems affect the attitude of local residents towards conservation actions and the way people use the area's natural resources. The uncertainty in the land tenure situation is an example of how people have been affected from conservation actions. Their development options are reduced and it has affected people's quality of life since they are always uncertain if the government will evict them again.

This Chapter mentions what has been the overall project strategy to achieve its goals and deal with the identified problems. The alternative that this project foresees for the Osa Peninsula conservation and development model is the payment for environmental services to local landowners, since other development options are reduced in the area. The main issues of this alternative are the sustainability of the PES system and the possible drawback to get local people empowered on managing their own resources, because they are paid to protect nature.

CHAPTER 6: ACHIEVING MEANINGFUL AND INCLUSIVE PARTICIPATION

This Chapter addresses two research questions, which deal with the conceptualization of the Osa biological corridor participatory approach and the identification of limitations to achieve meaningful participation. The logical argument to incorporate participation in conservation programs rests on the assumption that local involvement in and sometimes control over conservation programs is critical to their success, and that economic benefits alone may not be enough to secure local support for conservation (Rodríguez 2000) (Jeanrenaud 2002). The question is, what is the concept that Osa BC is implementing? This Chapter describes how different actors get involved in the project and the mechanisms for decision-making. It will identify the level of participation that the project work and what are some limitations to achieve more meaningful participation.

Conceptualization and Characteristics of the Participatory Approach in Osa BC

The interviewees had different perceptions about the importance of working with the communities. Some see it as improving the effectiveness of the project (mainly interviewees from the Technical Coalition). Others see it as a social justice issue. For example, one government official told a story about a community meeting in which the local people complained about two things: first

their corn fields were damaged by pizotes[47] that ate the maize. Second, more jaguars[48] are present and represent a threat for cattle. People asked: "what can we do?" We are not supposed to kill the animals, "what are our options?" This is a major dilemma that most conservation projects, like Osa BC face. People are an integral part of the ecosystems and cannot be taken out of the picture.

But, how does the project integrate the human and biological dimensions of conservation? The evolving nature of the participatory approach, during phase 1 and now in phase 2, shows how this project has conceptulalized participation. The key issues involve who has the opportunity to participate and the dynamics of participation.

The project started as an initiative of the Technical Coalition members, which during the first phase were the only ones participating in the decision-making and implementation of the biological corridor. The dynamic of the Coalition is that every organization work in its niche. They share information and the efforts with other members during periodic meetings. They conceptualize their role as being responsible to give technical support to the government for the establishment of a biological corridor between Corcovado and Piedras Blancas National Parks.

The way the project considered the involvement of local communities during the first phase was mainly through educational programs and carrying out

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[47] The pizote, also called coati (*Nasua narica*) is a member of the raccoon family. Pizotes inhabit wooded areas (dry forests, rain forests, cloud forests) of the Americas. They are carnivores, preferring small vertebrates, fruits, carrion, insects, and eggs. They readily adapt to human presence.

[48] Jaguars are the biggest cat on the continent. In size its prey ranges from large domestic livestock such as cattle and horses (for which it has a poor reputation with local farmers)

meetings in different communities (CBO 2001). The project also has developed bulletins to help inform people about their actions, and had carried out small projects with parataxonomists[49].

Including Local Participation, Establishment of the Local Committee

Before the establishment of the Local Committee, the Technical Coalition faced a lot of criticisms from local leaders and organizations. They criticized that the NGOs of the Coalition get the funding for conservation actions and local communities do not get benefited. Several local leaders of Osa Peninsula also criticized that the Coalition did not consider local participation or grassroots organizations as members, this limit people's opportunities to receive benefits; that is why people from local communities requested being part of the Coalition. The negative opinion of local people about NGOs originates from the actions of previous NGOs projects, like BOSCOSA. "BOSCOSA was an unsuccessful project," Dionisio Cascante said, and many people still relate all NGOs with this project. This makes sense because most of the NGOS that are now part of the Technical Coalition worked also in BOSCOSA.

Members of the Technical Coalition responded to those criticisms saying that donors ask for some administrative skills that grassroots organizations do not have or cannot afford; that is why NGOs receive all the funding for the projects. They argue that it is not negative that NGOs work in the area, because if it weren't for them there wouldn't be any funding coming in.

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[49] Parataxonimists are residents of forest areas that the Costa Rican national agency responsible for bioprospecting (INBio) hires to undertake biological inventories in the specific area. There is a lot of debate of how this agency is using local knowledge for commercial purposes, and how much are local residents benefiting from this relation with the agency.

The exclusion of local participants within the Coalition was a big obstacle for the Technical Coalition. "We knew from the beginning that we had to work with local stakeholders" Mario Lara said, "but in Osa there is no local referent, there is a problem of representativity, therefore it was difficult for the Coalition to invite a local partner since we did not know whom to ask!"

The BOSCOSA project had the same rationale as the Osa BC regarding local participation. Little (1994) mentioned that because of the tensions and heterogeneity of the population, the program designers proposed to work mainly through local grass-roots NGOs rather than deal directly with unorganized farmers.

Criticisms from local leaders were increasing as the project started its activities without local people involvement. Although local leaders demanded participation in the decision making, the NGOs remained reluctant to accept. Nonetheless, CEDARENA, a Technical Coalition NGO recognized the importance of local leaders participation. This NGO had to request support to implement the land tenure study because the landowners did not want to give the information of their tenure situation for fear to lose their lands, they were not clear what were the purposes of the study. The researchers lost a lot of time at the beginning trying to find out how to gather the information, it was until several local leaders accepted to support the project and accompany the researchers that people were open to respond to the survey.

The first steps to incorporate local participation started after phase 1. The experience with the land tenure study helped the NGOs to be more open to

consider a more active participation of local people, but what apparently triggered their incorporation was that the Mesoamerican Biological Corridor required that every biological corridor project had to have local communities participation, in the form of a local committee or using existing organizations. The reason for this requirement was to tackle the increasing fears and rejections from local populations to conservation projects like biological corridors. The Technical Coalition, therefore, received pressure from both sides. Evidence of the type of pressure they received was that the Coalition has to change its name, when the project started they called themselves the Osa Coalition, but since they were so criticized to not represent the Osa Peninsula, they had to change their name to Technical Coalition, and emphasize that they are organizations that give technical advice of what should be done in Osa Peninsula for conservation purposes.

In September 2002 the MBC called for a two-day workshop that people from all over the Peninsula, from Technical Coalition NGOs and other local organizations (like SIPRAICO and FICOSA) participated. The workshop focused on working groups where people discussed several issues: the main doubts about the Osa BC; the activities that would help the establishment of a biological corridor and that would help also local landowners to benefit from the project; and lastly, the roles of the NGOs, MINAE and the Local Committee in the project. The important outcome of this workshop was the selection of the members that constitute the Local Committee. Since its establishment, the project supports the

Local Committee by giving funds for carrying out the meetings, and they pay the salary of the coordinator.

There were no restrictions on the number of people who could join the committee; twelve people decided at that time to join it. That same day they appointed a coordinator who became the contact person with the coalition and the government. One of the interviewees who participated in the workshop said that the nomination of the local committee was democratic; everybody was invited and had the same opportunities to be part of the committee.

Since its creation, the relations among the Technical Coalition NGOs and the Committee members have improved. One member of the Local Committee mentioned that there are no fights during the meetings anymore, and now they feel more part of the process because one NGO within the Coalition has listened to the Committee proposals. Nonetheless, they still criticize that NGOs have received and managed all the funds in past and present projects, and the locals do not benefit from those funds. Mario Lara, from the Technical Coalition, mentioned that the problem is that donors only give money to organizations with the appropriate administrative structure, and in Osa Peninsula there are no such organization that can receive those funds.

Local Committee Dynamics

The Local Committee has made an open invitation to all the Osa Peninsula residents who are interested to come to the meetings; structure is not very rigid and formal, because people do not attend often to the meetings, and if attend do not participate. So they try to make it as informal as possible. They get together

once a month and analyze the proposals that each member brings to discussion about what can be done in the Osa BC, they also analyze what the Osa BC is doing. One member of the committee is in charge to visit the communities and gather information about what people want and what to expect from Osa BC. Sometimes they use consensus, sometimes they vote to decide what proposals or concerns to send to the Technical Coalition. The coordinator (who is College educated and moved in to Osa Peninsula several years ago) is in charge to communicate the results of the discussion to the Technical Coalition.

Apparently they have had problems to get people involved because there are only twelve members in the committee, and not all of them come all the time. One member of the Local Committee affirmed that people are involved in the project because they attend the workshops and meetings and usually ask questions, although they do not attend to the Committee meetings. But interviewees from the Technical Coalition and from the Local Committee disagree with that assertion, saying that Osa Peninsula residents have not shown interest in the committee or the project, for them, there is still lack of representativity in this project.

So far, the Local Committee with *Fundacion Neotropica* submitted one proposal to UNDP; when I carried out the interviews they were waiting for a response, but had good expectations on getting the funding.

Also, with the MBC support, members of the Osa BC, mostly from the Local Committee, visited a biological corridor project in Darien, Panama to share their experiences. One interviewee from the Local Committee who visited Darien

assured that it was a great experience although he regrets that he did not have the chance to see the 'biological corridor itself'.

Local Committee Role. Interviewees have different perceptions about the local committee role. For members of the local committee, this entity will identify the local needs and will make proposals of the type of development and conservation actions to undertake, and present them to the Technical Coalition. They would work in implementation too, what they want at the end is to promote bottom-up initiatives. Although one interviewee mentioned that they would like to be able to get funding directly from donors agencies, he knows that it is not possible right now since they would need administrative and legal capacities, which is why they rely on the NGOs to receive funding.

Government Participation

All interviewees agreed on the relevant role of the government in this project. The area that has been designated for the biological corridor overlaps with the GDFR area, which is State owned (although the biological corridor is smaller than GDFR). Consequently, the active participation of the government is important since NGOs do not have decision-making power on the management plan of the Reserve, although they can advise the government what actions to take in the Reserve. But ACOSA has not been very committed to participate in the project. "They change their representatives very often, do not attend to the (Technical Coalition) meetings and do not participate in decision-making" (Mario Lara interview).

It is difficult to clearly identify the passive participation of the government in the project. According to Osa Conservation Area (ACOSA-MINAE) Director, the main constraint for their participation is their lack of resources and time. The Environmental Ministry in general is facing important budget cuts, and there are few governmental officials to carry out all the tasks, especially managing the protected areas, so projects like the Osa BC have low priority.

There could be other reasons: one is that the government does not feel as an insider in this project because the NGOs started it without their participation, it was until the donors requested Governmental participation that the Coalition opened up a space for the government.

Also, a situation that seems to create conflict between the project and the Government, and that could jeopardize the project is ACOSA's Director position about GDFR management. He argues that since GDFR is a State owned area, actions taken inside have to be defined by the Government, with local participation. ACOSA is now trying to define a Management Plan for the Reserve.

In addition to ACOSA, interviewees mentioned the importance to invite other government actors like IDA and local governments. IDA's participation would be important to deal with the land tenure situation. Also, in addition to local government, these institutions are important in defining a land use plan for the area. But so far they have not participated in the Osa BC.

Influence of MBC on the Osa BC Participatory Approach

The MBC has influenced directly and indirectly the participatory approach of the Osa BC; they encouraged projects like the Osa BC, to work in coalitions, using the idea of building strategic partnerships to be more effective. The MBC and donors also promote (and almost require) that biological corridors have local communities' participation. In this case, the MBC Regional Office was directly involved in the organization and facilitation of the workshop that established the Osa BC Local Committee.

Dynamics and Decision-making Process in the Project

The Technical Coalition has taken the main decisions about where to work and what to do. The decision-making mechanism within the Technical Coalition is by consensus. The project uses different technical studies to propose the areas to focus each organization's conservation actions. For example they have used the INBio's endemism distribution study; CEDARENA land tenure assessment; GDFR rapid ecological appraisal; GIS databases and other resources. In the first phase, the activities related to the biological corridor establishment focused on 1000 hectares.

In addition to each NGO proposals, the Coalition gets together with the Local Committee coordinator, and gets feedback about this committee's opinion and proposals. The Local Committee have suggested what activities to carry out specifically related to production activities; decisions on other parts of the project, like the land tenure study or the activities each organization does are less open to local involvement. The interviewees think that international organizations do

not appear to try to influence the decision-making or the project's agenda; however, TNC has been very active in giving advice to decide where to establish the biological corridor and define the conservation strategy in Osa Peninsula; so it is debatable the extent to which international organizations influence the project.

Identifying Levels of Participation

The overview of the Osa BC participatory approach characteristics, its decision-making process and the role of different actors, gives more elements to conclude that participation in Osa BC has been practiced in the lowest levels that Perez (1997) identified. From the description of the project's participatory approach it is evident that the level of participation during the first phase involved information sharing. Gonzalo Matamoros, a governmental official, has criticized that participation in Osa BC is very theoretical. NGOs have come together, but other actors have not been able to get involved, especially local communities and groups.

Evidence that a project is practicing participation at low levels is when the intended beneficiaries and, the ones directly affected by the project, have a passive role in the design and implementation (Campbell and Vainio-Matilla 2003), (Perez 1997 cited in Pratiwi, 2001). During the first phase, communities' involvement was through open meetings where the project communicated what they were doing and listened to people's questions. They also carried out educational programs where teachers and local leaders received training (see

Chapter 2 for more details). Nonetheless, as Armando Castro admitted, the Coalition is not sure how much of their message has been understood.

According to Alberto Gonzales, from the Local Committee, lack of information has affected the local people's acceptance of the project and has intensified their fears of the project's actions. He affirmed that information of the project's actions and studies are hidden; the Local Committee does not know very well what to inform. Alberto denounced that "three years ago the Osa BC project started and this is the moment that local people do not understand what is a biological corridor and why to establish one". I was able to see that this is an accurate assertion because even members of the Local Committee did not know what the project's objectives are or who participates on the Technical Coalition.

The creation of the Local Committee brought important changes in the Osa BC participatory approach, the project appears to be moving toward consultative participation level. Through open meetings and informal consultation, the Local Committee with *Fundacion Neotropica* help, defined a sub-project within the biological corridor framework. Mario Torres was pleased to see that over time the project has improved in getting people involved in the project.

The project expects that the local committee will be more directly involved in the decision-making about the projects' activities in GDFR, but the Local Committee is still weak, there is some questioning about how representative is this committee. The Coalition is waiting for the Local Committee to consolidate and become more involved; nonetheless one interviewee said that the Coalition

is still cautious with them, that is why the decision-making process still relies more on the NGOs.

It has been hard for the Local Committee to consolidate. The lack of funds has affected their consolidation. The Osa Peninsula does not have a good public transportation system, and members of the local committee live far away from each other, on their farms or other small towns. So, one thing that has prevented people from attending the meetings is the lack of transportation. During the first months of its establishment, the Local Committee received funding from the MBC national office; nonetheless they stopped giving the financial support. The Osa BC is paying the salary of the coordinator, as mentioned above, and giving some money for meals and other miscellaneous expenses.

Although the Local Committee is a good initiative to move forward to meaningful participation, this committee is still not working at the consultative level of participation. "They (the Local Committee) have not really worked or have an incidence", said Gonzalo Matamoros, a governmental official.

Evidence suggests that Osa BC has so far conceptualized participation as a means to increase people's support of conservation actions; several limitations presented below are preventing Osa BC to achieve meaningful participation.

Limitations to Achieve Meaningful Participation in Osa Biological Corridor

Definition of the Problem and Objectives

A problematic characteristic about projects that practice participation at low levels and that prevent the inclusion of different groups is that outside

organizations define the problem. In the Osa Peninsula, as history shows, the urgence of protecting biodiversity was a concern of international and national environmentalist organizations that came to the area in the early 1960's and 1970's. Osa BC has followed the same pattern, outside organizations defined the Osa Peninsula conservation problems and decided what actions were needed to overcome those problems. While this research did not survey local residents, it is clear that they were not involved in defining the problems. As several interviewees noted, the local residents find it difficult to support conservation when they are hungry (Leopoldo Zamora, Alberto Gonzalez and Cesar Saborio interviews). This is a pretty clear statement that conservation is not their first priority.

It is also problematic that the objectives of conservation and development projects are still tied to a protectionist discourse. As a result, actions to protect biodiversity are favored over gaining local support, developing local capacity to manage the area's resources, and distributing the benefits of conservation or at least compensating for the reduction of development alternatives. In the case of Osa BC, the Technical Coalition defines the objectives, gets the funding, and implements most of the activities. Therefore their interpretation of the objectives might be what in practice the project pursues. For them, the connectivity between Corcovado and Piedras Blancas, favoring the protection of Osa forests is the main objective.

One implication when not considering different local groups in defining the problem is that it is more difficult for people to understand the project's objectives

and actions. Several interviewees affirmed that informing Osa's residents about the project has been very difficult, and they do not even know if they have succeeded. The project distributed an informative bulletin about the project, but it ended up being very problematic because most people understood that they were expanding Corcovado NP, and therefore several people started to protest the project. At this point, according to several interviewees, people were not informed. Even if members of the Local Committee who have attended meetings and have had access to certain project information are misinformed, what could be expected from other residents? Being able to understand the project will also affect the extent to which people would be willing to participate.

Marginalized Groups Participation

Participatory exclusions are considered a problem in regularized institutions (like committees, different type of associations, and others). They refer to the exclusion of marginalized and powerless groups in the decision-making and implementation of a project like the Osa BC. When the project started, it was exclusionary because all participants were outsiders (national or international NGOs). Local organizations and individuals (CLACOSA, local development associations, local leaders) complained that outsiders were making decisions about their resources. As mentioned before in this section, because of the pressure it received, the project opened up spaces of participation to 'local communities'.

The problem is that within those communities there are powerful and powerless groups, there are people with different interests and ideas, and who

affect and are affected differently by the project. Projects assume that communities are homogeneous entities, therefore are not aware of the politics of the local setting, and which groups are more likely to participate and which are excluded. That is why projects often are clueless when they were not able to distribute benefits more widely or to make tangible their efforts.

It is beyond this thesis to analyze which groups and interests are represented in the Local Committee and which are left behind, nonetheless, one thing that was evident was women exclusion on the Committee.

All the members of the local committee that I interviewed agreed that women have not been actively participating in the project. Their explanation is that 'they are not interested'. Although two women started to show up to the meetings, they left shortly; Local Committee members did not know why they left. Jorge Bermudez, from the local committee, mentioned that the problem is that women are not formally organized, he only knows about one organization in La Palma[50] (ASOFET), that is why it is difficult to invite them. This interviewee also acknowledged that in the Osa Peninsula there is a deep rooted '*macho* culture' that would make it very difficult for women to participate even though they were interested.

Interviewees from the Technical Coalition were not sure about whether or not women participate in the Local Committee. They ageed that the project does not have a specific gender policy, it is up to every NGO to incorporate this concept

[50] La Palma is smaller than Puerto Jimenez, but it is considerably larger town than the other found in Osa Peninsula.

and how they do it. *Fundacion Neotropica* was the only organization that considers the gender component in their activities.

The MBC does not have a gender policy either, but as Clara Zeledon mentioned, they acknowledge the importance of including it and are working towards defining one.

Distribution of Benefits

Several comments of the interviewees seem to conclude that the extent to which people benefit from the project affects their willingness to participate. The possibility of receiving environmental services payment has been the only project activity during phase 1 that has directly benefited some people in local communities. But, according to a member of the Local Committee, the majority is not sure how this project will benefit them. The message of the biological corridor has not been as strong as the opposition message, said Felipe Lopez. Opponents of the project think that it is suspicious that so many big organizations are working in Osa Peninsula; they feel that these organizations are "using them" to receive external funding.

Alberto Gonzales, a local committee member, said that until there are tangible benefits, people won't have an incentive to participate, and they would turn against the project. The problem is not only providing tangible benefits, but also making sure that the ones who bear the costs of the conservation actions are the ones who benefit. Conservation actions through tourism have been the activity that provides more economic benefits in Osa Peninsula. But, according to Jorge Bermudez, a member of the Local Committee, the most benefited with the

protected areas and conservation actions are Puerto Jimenez residents, because most tourists tend to visit this town. Puerto Jimenez is more of an urban setting, its residents for the most part, are not the ones affected by restrictions on natural resource use, and what is sad is that they are unaware of the precarious situation of the neighboring communities.

It seems that being able to provide tangible benefits to those affected by conservation actions has been a problem for ICDPs in Osa Peninsula. In his assessment about BOSCOSA project, Cuello et al (1998) mention that although Osa Peninsula receives high levels of funding through NGOs and various projects, very little of this benefits local communities. They mention as one of the biggest problems the lack of coordination among the number of organizations working in the area doing small repeated things that at the end do not benefit the communities. The Osa BC Technical Coalition is a response of this criticism, now they are trying to coordinate efforts to be more efficient.

One member of the Coalition mentioned that the project does not have yet a strategy that will guide them deciding how to distribute the project's benefits. Nonetheless, the decisions on where to work determine who is going to get benefited (Laura Mena interview). The Local Committee and members of *Fundacion Neotropica* selected the beneficiary families. It is not surprising then that the selected families live in the communities who have representatives in the Local Committee. But they are also communities with relative easy road access. An interviewee from the Technical Coalition mentioned that being near a main

road was an important criteria to choose a community, because the project did not have enough funds to work in isolated places.

Accessibility can be seen as a form of exclusion in this context, it can imply that opportunities to participate and benefits do not get to the ones in most need but the ones that can be easily approached. It is important for a project that wants to achieve meaningful participation to be aware of whether its decisions and implementation are exclusionary.

Effects of Land Tenure on the Opportunities to Participate

Uncertainty of their land tenure has affected the opportunities of several Osa Peninsula residents to get involved in conservation projects like Osa BC. As mentioned in Chapter 2, SIPRAICO (an Osa Peninsula peasants union) began a legal fight against the government to ask for compensation for the people who has been expropriated inside the GDFR. According to a governmental official, SIPRAICO is agitating the people to pressure the government for those payments. Even though getting involved in Osa BC planning and implementation would not affect their fight to get compensation, SIPRAICO members think otherwise and therefore are not allowed to get involved with the Osa BC.

A study that characterized Osa Peninsula population identified that Osa Peninsula's peasants are not prompt in organizing and affiliating with associations, unions or cooperatives, they mentioned that SIPRAICO has not too many members (90 families in total are involved in the legal process led by SIPRAICO; Franceschi, 2001). So, it is possible that a great majority are not directly involved in SIPRAICO, and therefore do not have such constraints to

participate in the decision-making of Osa BC. But, as will be discussed below, the great majority is not participating. Jorge Bermudez stated that if people do not feel that it is their land, they are less willing to invest in productive activities and protect the land resources.

Nonetheless there could be cases where people not having title do have a sense of ownership, even in these cases, the lack of development options in Osa Peninsula and the wider political context affect possibilities of people to be able to have a decent quality of life and stay in the long run.

Dionisio Cascante, from ACOSA, said that the government do not want people to leave, he thinks that the Reserve can be better managed with 'people inside', but, until recently, government's actions have not shown how they were preventing the great migration of people in this area. One member of the local committee said that paying people to leave creates social problems because those people will have to be relocated. This assertion concurs with a study that has documented the increasing migration rate in last years in Osa Peninsula (Maldonado, Bonilla in press). Nonetheless, by opening opportunities to access the payment for environmental services system, the government with the assistance of the Osa BC project, have done one step forward to slow the migration out of Osa Peninsula.

As Little (1994) argues, local involvement in decision-making could be almost impossible when land rights are skewed. But also, if people do not have development alternatives and a good quality of life, their interest and support to conservation projects will always come in second place.

Lack of Trust Between Actors

In Osa Peninsula, there are several factors that prevent trusting and cooperative relations among actors. There is an environment of suspicion about the NGOs actions. On the other hand, NGOs have not found local organization(s) in Osa that represent local people's needs and that are able to dialogue and negotiate with other actors. And, the unclear government's position regarding the project affects the relations among the actors.

Mario Lara, a member of the Technical Coalition argued that people do not trust official organizations like MINAE or CLACOSA; or any other grassroots organizations to represent their needs. This person mentioned that something challenging in Osa Peninsula is that there are no clear positions that set the stage for negotiations, in Osa, he said, every person has a different opinion; therefore is difficult to try to reach agreements between the residents and the government.

The project is hoping that the Local Committee will become a wide accepted institution in the area that could represent the local people interests. Until then, and when conservation actions prove to give benefits to local communities, there will be resistance to government and NGOs processes.

Summary

The participation of the intended beneficiaries has been considered as crucial for the effectiveness and sustainability of the projects. There are different levels of participation, the Osa BC started at the lowest level but has begun to

move to consultative participation level, where some local leaders have voiced their needs and proposed a sub-project.

There are several challenges for Osa BC to achieve meaningful participation, for example incorporate those who are affected by the project's actions in the definition of the problem and identify marginalized groups that have been silenced (like women).

When people do not get benefited, they most likely won't participate, the problem in Osa is that so far, conservation actions in Osa Peninsula have not brought enough benefits to local people.

The land tenure situation and lack of trustful relations affects the people's opportunities and willingness to participate.

CHAPTER 7 CONCLUSIONS AND RECOMMENDATIONS

The main purpose of this thesis has been to explore how the Osa Biological Corridor, an integrated conservation and development project in Costa Rica, is facing the challenges of dealing with the promotion of biodiversity conservation while providing economic benefits to local people who bear the costs of conservation.

The Osa Biological Corridor is part of the Mesoamerican Biological Corridor, the largest conservation initiative in Central America. As such, it is part of a design to bring sustainable development alternatives to the region. Nevertheless, the high levels of social complexity in the region and also the intrinsic complexity of ICDPs impose numerous challenges to these projects. Several authors (Miller, Chang et al. 2001; Solís, Madrigal et al. 2002; Brown 2003; Campbell and Vainio-Matilla 2003) suggest that inclusive participatory processes can overcome some of these challenges. In this thesis I have been especially interested in understanding how the Osa BC incorporates participation and identifying some of the limitations to this effort.

In addition to posing important issues related to biodiversity conservation and participation, I chose to study the Osa BC because it is located in an area with which I am acquainted. This was important since I did not have too much time to spend in the field, so my previous experiences in the area helped me to identify the interviewees and understand their positions and comments.

Summary of Findings

The first two chapters of this thesis provide context information to help frame the project at the national and regional level. Being aware of how this project is positioned is important because the Osa BC is not an isolated project, it is part of the Mesoamerican Biological Corridor, which is part of the Central America's integration process that, among others, is trying to unify conservation actions following similar objectives. The Osa BC and the MBC share two main goals: to enhance the protected areas system and provide socio-economic benefits to local communities that have borne the costs of conservation. The interviewees noted that the relationship between these projects is weak; nonetheless it is interesting to see how they share similar objectives and envision similar design and activities, so it is possible that their relationship is not as weak as perceived.

The Costa Rican national environmental policies also influence the Osa BC strategy, and there are two policies that are worth noting. First, the decentralization process that started during the 1990's has promoted civil society organizations to start initiatives to deal with problems of conservation that before was only the government's responsibility. The second one is the enhancement of the payment for environmental services, a mechanism to finance conservation outside protected areas.

Chapter 3 reviews the concept and characteristics of ICDPs, and how the convergence of different discourses influences the design of these types of projects. This chapter also reviews several issues that different authors have identified as obstacles to achieve biodiversity conservation and promote

development at the same time, including the emergence of alternatives to this model, like direct compensation for conservation. This thesis has emphasized how the concept of participation is practiced in ICDPs, suggesting that pursuing meaningful participation could enhance the achievement of conservation and development projects' goals.

Chapters 5 and 6 present and discuss the main findings of this thesis. Below is a summary of some factors influencing the Osa BC design, the main limitations on its implementation and its participatory approach.

Different Discourses as Factors Influencing the Project's Design

Integrated conservation and development projects like the Osa Biological Corridor bring opportunities for different actors to implement the nation's conservation policies. The NGOs that have been working in the Osa Peninsula realized that in order to be more efficient in their conservation efforts they needed to work together and unify their agendas. The Osa BC was conceived as part of this effort to work together.

The organizations that started the project had similar discourses, as mentioned in Chapter 5. From a cosmocentric-ecocentric perspective, the Technical Coalition, the Donors and the Government defined the connectivity between *Corcovado* and *Piedras Blancas* NP as the main objective. The Local Committee differs from the Technical Coalition over the role of poverty alleviation in the project's main objective. Nonetheless it is the objective defined by the Technical Coalition objective that is driving the Osa BC.

It is important to recognize how different discourses within a project can affect a project's goals especially the participation of local communities and other interest groups in the management of their surrounding resources when local interests become secondary to global conservation interests. Nevertheless, by recognizing the possibilities of bringing together different perspectives in finding creative management options, then local peoples' participation may be more appreciated in the long term.

Limitations for Conservation Actions in Osa Peninsula

The following are several limitations on conservation actions in the Osa Peninsula:

- A conflictive history, which affects credibility of NGOs and government actions.
- Land tenure insecurity that affects a sustainable use of natural resources.
- Lack of development alternatives for smallholder farmers.

The situation of smallholder farmers in the Osa Peninsula is problematic. They work in marginal areas with low yields and suffer from lack of services and access to markets; many farmers have had to migrate out becoming part of the most marginalized groups, the landless. For these reasons, it was important that the Technical Coalition acknowledged the conflictive situation and socio-economic problems of the Osa Peninsula residents as an obstacle to conservation. This has enabled the project to give more attention to social issues and try to implement activities that benefit local communities.

The land tenure situation is a problem in itself but also affects the rest of the problems. It affects buffer zone management, natural resources use and conservation actions, opportunities for development and the willingness of people to get involved in conservation actions.

Overcoming the Project's Limitations: Efforts to Benefit Local Communities

With the land tenure study, the project has brought changes to the area. Now landowners without legal tenure can access the payment for environmental services system. Besides the land tenure study, another activity that is planned to provide benefits to local communities is the sub-project: "Conservation of biodiversity and sustainable production in the Osa BC," or as I have called it "integrated-conservation farming." This subproject exemplifies a type of ICDP activity. It combines reforestation with productive activities that are environmentally friendly. But this project does not consider the local knowledge in the Osa Peninsula that could be valuable for the implementation. Brown (2003) suggests that migrants' knowledge is important, and could be enhanced with scientific knowledge that provides the ecological perspective and could bring innovations in resource management and practice.

It remains to be seen if the project could be expanded to include more families, (so far there are only fifteen families in the project), and whether the project will succeed in its attempt to achieve the project's goals. As mentioned in Chapter 3, ICDPs are largely criticized for their apparent failures; therefore it will be important for the project to take measures to monitor and find indicators that

show if they indeed were able to achieve both biodiversity conservation and provide benefits to local people.

The payment for environmental services is considered one of the best options for the Osa Peninsula to deal with conservation and development goals. Given the lack of productive alternatives in the area, and the burdens that conservation actions have put on local communities, it is important that the project facilitate actions that will directly benefit the local communities. Chapter 3 discusses the limitations to this environmental services payment system. One involves equitable access and compensation. It appears that big landowners benefit more than small farmers. The other limitation is the financial sustainability of the PES system in Costa Rica.

Economic benefits alone may not be enough to secure local support for conservation. This is why people-oriented conservation approaches are increasingly considering community participation, since local involvement in conservation undertakings is critical to their success.

Incorporating Local Communities in the Osa BC Participatory Approach

When the project started, the Osa BC participants had similar interests and they represented organizations with similar discourses. Due to pressures from the local communities, the Mesoamerican Biological Corridor and the acknowledgement by the Technical Coalition that the project needed the support of local communities, the project now incorporates local leaders' participation. Participation of different actors means bringing together different worldviews and

discourses that sometimes are contradictory; that is why many within the Technical Coalition were reluctant to open spaces for other actors.

Despite these concerns, they are now working together, but in a very limited fashion. The Technical Coalition is still relatively closed, where only NGOs and government officials participate. Although the Local Committee makes suggestions, decision-making is still controlled by the Technical Coalition. The government participates in a very passive way, and it is not very clear why. The Local Committee is trying to become a representative organization in the area; so far only a few people (12) are actively participating. It is not yet clear if this organization can give voice to the Osa Peninsula residents. Locals are informed by workshops and by the local committee, but there are still a lot of misinformed people. The Osa BC is slowly moving from an information sharing type of participation towards a more consultative type, in which members are consulted about some aspects of the project.

Limitations of the Project and Suggestions to Achieve Meaningful Participation

One limitation is that the Technical Coalition did not incorporate local people in the definition of the problem and the project's design. This affects project implementation because the defined problem does not make sense to people and as a result they are less willing to cooperate.

Although the project opened a space for participation to 'local communities,' it seems that the Osa BC has not paid close attention to what groups or interests are represented in this committee and what groups are left behind. Communities are not homogeneous entities and therefore it is important to make efforts to give

voice especially to those more marginalized groups. Although I did not attempt to analyze which groups are participating in the Osa BC, I was able to notice the invisibility of women's interests and participation in this project. From the comments of Local Committee members and most NGOs (except for *Fundacion Neotropica*) it seems that women's participation is not seen as very important. There are no efforts by any of these actors to try to understand why women are apparently 'not interested' in participating. One interviewee suggested that this is a result of the 'macho culture' that pervades in the Osa Peninsula.

Another problem related to incorporating different people in the Local Committee is that people in Osa were not sure how the project was going to benefit them. Several interviewees mentioned that if people do not perceive benefits they will not have incentives to support the conservation actions.

A third problem, the lack of land tenure security, also affects people's willingness to invest in protection actions and in the opportunities to decide in the management of the area they inhabit.

Lack of trust and increasing suspicion among actors is another limitation for different actors to get involved. Local people and organizations have expressed their concerns about the work of the NGOs in the area, and their frustrations with the government's conservation actions. The NGOs argue that there is no representative organization in the Osa Peninsula with whom they can negotiate.

A situation that seems to create conflict between the project and the government, and that could jeopardize the project is the ACOSA director's position on the management of the GDFR. The director is apparently not open to

any type of co-management schemes. His position is that GDFR is a State owned area and therefore it has to be managed as it is. This is why the government is now trying to define a Management Plan for the Reserve. The implications to the biological corridor could be negative; the roles of NGOs, Local Committee and other organizations might be diminished. As one interviewee mentioned, the government's position has affected them because they don't know how to approach the communities if the government does not recognize the biological corridor project.

Through the Technical Coalition, the project has brought together the different NGOs working in the area and has made attempts to reach out to the government and local communities. There are good opportunities for the Local Committee to represent the Osa Peninsula resident's interests.

The big challenge ahead is to define how all the interested parties are going to work together in managing this Reserve and integrating it into the biological corridor scheme. As Brandon (2001) concluded from an evaluation of different ICDPs around the world, this type of project needs both policy-level and project-level components. In this case, Osa BC requires support from the government with clearer land use policies. Without this support there is a limitation of what they can do to achieve their goals.

Recommendations for Osa BC implementation

Finding a Solution for the Land Tenure Situation

As many interviewees mentioned, the land tenure situation in Golfo Dulce Forest Reserve affects the people's livelihoods and the conservation actions. Although it is clear that the NGOs have considered solutions to land tenure, unfortunately most of these are outside the scope of the project. Many mentioned that only political will could solve this problem. With the land tenure study, the project succeeded in facilitating a solution, therefore it is important that the Coalition keep putting pressure and take a more active role to find a solution to the problem. The Technical Coalition could facilitate a process with local communities and the government to define the property rights in the reserve and ways to enforce those rights.

Incorporation of Different Perspectives in the Project

If meaningful participation is to be achieved in development and conservation projects, its focus should be on the divergent interests of multiple actors within communities, the processes through which these interests emerge and through which various actors interact with each other, and the institutions that influence the outcomes of political processes (Agarwal 2001). Are the interests of the ones that are most affected by or can more affect conservation actions represented in the project? Being inclusive is not an easy task.

The Technical Coalition and the Local Committee provide interesting opportunities for those directly affected by the project, as well as other

governmental and non-governmental organizations to participate in the definition of the problem, design and implementation.

Little (1994) suggests that projects should start with a simple model that identifies the major interest groups, their current resource-use motives and whether these conflict with those of other groups. This model should identify the behavior of these groups and its effects on resource use and conservation; as well as the potential winners and losers of the conservation program.

One suggestion for those managing the Osa BC involves applying tools for deliberative inclusive processes that can transform decision-making and management processes and open up co-management frameworks to allow for learning and collective action (Brown 2003). Deliberation implies that the positions of different stakeholders are recognized, while inclusion implies including different participants in these processes. There are several methods that can be used (focus groups, issue forums, participatory rural appraisals). These methods, according to Brown (2003), emphasize working with small groups of people, focusing on the future on common ground, urging full attendance and participation, incorporating a wide range of interests and seeking public commitment to action.

Another suggestion from Brown (2003) involves incorporating local knowledge in problem definition. This implies adopting a more pluralist understanding of different knowledge, values and worldviews to inform conservation actions. Several interviewees mentioned that technical (biological) studies were the foundation for the decision-making in the project. The NGOs

and the government should be especially concerned with including local knowledge when devising conservation priorities, and accepting the validity of local knowledge as complementary to scientific knowledge.

Brown (2003) introduces the concept of traditional ecological knowledge (TEK) as useful for ICDPs. It requires accounting for how knowledge is embedded within the management strategies, social institutions and the worldviews of different actors.

Efforts should be made to make the voices of powerless groups heard in deliberative spaces, especially those of women's groups. It is important for them to learn how to 'play by the rules'; to articulate a position, mount an argument, and to define a view. In deliberative spaces in which 'experts' are present, even the most well-equipped middle-class lay person may end up feeling cowed (Cornwall 2002). So, tactics are needed to make different discourses heard. These tactics could be popular education, assertiveness training, building skills of argumentation or simply providing people with information about their rights and about the projects in which they are being asked to participate. It is also important to pay attention to practical details that are constraints on people's engagement in the project. Transportation is a big obstacle for the people to attend to the project's activities; so provisions should be made to facilitate people's attendance.

Efforts on Overcoming Lack of Trust

Giving information and clarifying the project's objectives and actions is fundamental for building trusting relations. Conservation programs could play an

important role in bringing together different actors and building trusting relations among the parties through a participatory approach.

Creating the Technical Coalition and the Local Committee are important attempts to build institutions that work across scales. But, as Brown (2003) suggests, it is important that people-oriented conservation institutions link global and international interests with local needs and development priorities. They must also be flexible and adaptable to give support to agreements, commitments and decisions taken in deliberative processes. It is important also to be aware that the policy and institutional landscape of conservation and development projects is constantly changing. What was good in the past may not be so now, so it is important to adapt and keep changing (Berkes 2004).

Summary of Conclusions

Reconciling Development and Conservation Actions

The implementation of ICDPs has been widely criticized for their apparent failures; nonetheless there is a debate about the reasons for their failures. For some there is an intrinsic incompatibility between protecting nature and promoting development alternatives. For others, ICDP failures could stem from implementation failures rather than an incompatibility of goals. Usually this type of project lasts for a few years, so sometimes it is difficult for them to have a long-term impact.

It is not easy to conclude why it has been difficult to find successful examples of ICDPs. Some case studies suggest that external factors beyond the project affect what the project is able to achieve. Regulations on natural resource use

have affected the livelihoods of local people. Instead of providing benefits, these regulations often reduce the opportunities of surrounding communities to find development alternatives, or have not provided any type of compensation. That is why in some places, local people disagree with those regulations. They often continue to use the resources at the same rate, and are less willing to cooperate in any activity that enforces those regulations, such as ICDPs.

The way that the government established the protected areas in the Osa Peninsula and the subsequent resource use regulations have provoked hostile reactions by local people to conservation actions and agencies. Deforestation is still a threat to the Osa Peninsula's forests. The government has an important role in monitoring and enforcing the logging ban in this area, but so far they have not been very effective. As a result, people from local communities become frustrated because the regulations on resource use affect their livelihoods, and yet are not enforced, thereby allowing outsider groups to continue illegal logging and hunting. In addition, the land tenure situation and the limited capacity of the Osa Peninsula's soils to carry out agricultural activities makes it very difficult for the people to find development alternatives and willingly get involved in conservation actions.

Taking into account the problems with promoting development options, the Technical Coalition and the government is considering the payment for environmental services as the alternative for the Osa Peninsula to deal with conservation and development goals. It is a win-win situation; local people get paid for their conservation efforts and forest protection is assured. Several

authors advocate approaches like the payment for environmental services because they are simpler and focus on few activities. One criticism of ICDPs is that people do not relate the activities they promote (e.g. training in agriculture techniques, organizational capacity, handicrafts, and others) to conservation actions. That is why giving payments to protect natural ecosystems helps people to connect the benefits they receive to biodiversity conservation. Direct compensation approach advocates propose the creation of markets for environmental services as a way to make these payments work.

The sustainability of this system is an issue if markets for environmental services are not in place in the near future in Costa Rica. But another important issue raised in this thesis is how beneficial economic benefits could be by themselves. It is important to consider that at the household level women probably will not have access to those payments, so productive activities, especially for food security, should also be promoted.

Receiving a payment, although a simpler approach, limits the participation of landowners to one of being a receiver of payments. After the contract is done, there is no warranty that the landowner will continue to protect the forest.

In a report of the Secretariat of the Convention on Biological Diversity, McNeely (2004) noted that to benefit local communities, conservation actions will require a challenging combination of incentives and disincentives, economic benefits and law enforcement, education and awareness, employment inside and outside protected areas, and enhanced land tenure and control of immigration; suggesting that economic benefits alone are not enough.

Relevance of Participation in ICDPs

Some authors have suggested that to assure long-term commitments to conservation it is important to assure the participation of different stakeholders in defining conservation actions (such as allocating PES). Local communities are relevant actors as resource users, but they are not the only interest groups. That is why it is important that ICDPs take provisions to identify different interest groups, because these could have the potential to contribute to conservation actions. Nonetheless, groups tend to have different motivations leading to different major roles, and there are power imbalances that are important to take into account if meaningful participation is to be achieved.

The Osa BC is not practicing meaningful participation yet, but it is important to acknowledge that it has moved from the lowest level (information sharing), to a consultative level. There are several limitations, for example that the implementers do not consider the participation of the intended beneficiaries (or affected) in the definition of the problem and the strategy. Also, there are no specific provisions to identify and incorporate marginalized groups within communities, and other interest groups (government institutions and civil society organizations of the Osa Peninsula).

The big challenge is to define how all the interested parties are going to work together in managing the Golfo Dulce Forest Reserve and integrate it into the biological corridor scheme. As Brandon (2001) concluded from an evaluation of different ICDPs around the world, this type of project needs both policy-level and project-level components. In this case, the Osa BC requires support from the

government with clearer land use policies. Without this support there is a limitation of what they can do to achieve their goals. This suggests that the involvement of different stakeholders may not be enough for achieving biodiversity conservation and promoting development.

Participation is not enough: Democratic Decentralization and Conservation Actions

The politicized nature of protected areas helps explain why conflict and resistance so often develop in response to parks and their management. Many local communities are dependent on resources within the protected areas, and these areas are not perceived as providing environmental services, but as territorial control strategies from the elite. Recognizing the politicized nature of protected areas is important because it suggests that awareness raising and attempts at consultation or participation are not enough to change many rural people's suspicions and resistance (Brechin, Wilshusen et al. 2002).

Therefore, conservation actions should start considering elements of political processes like governance (Brechin, Wilshusen et al. 2002). This element refers to arrangements for decision-making and power sharing. Now that structural adjustment and decentralization processes are taking place, the opportunities to participate in sharing control are increasing. Nonetheless, the current decentralization reforms in Costa Rica still embody tight central government oversight and do not transfer significant power to local institutions. In addition, decentralization is not a panacea since local institutions do not necessarily assure accountability to all.

The decentralization of environmental management started in Costa Rica with the establishment of the Conservation Areas System (SINAC); but this model is not being implemented in all regions. Officials from ACOSA should consider implementing the decentralization scheme that was proposed with SINAC, and consider elements of democratic decentralization.

Decentralization is an act in which a central government formally cedes power to actors and institutions at lower levels in the political hierarchy. Democratic decentralization occurs when powers and resources are transferred to authorities representative of and downwardly accountable to local populations. The underlying logic of decentralization is that democratic local institutions can better discern and are more likely to respond to local needs and aspirations because they have better access to information due to their close proximity and are more easily held accountable to local populations. It aims to increase popular participation in local decision-making (Ribot 2002).

Democratic decentralization requires both power transfers and accountable representation. These go together; transferring power without accountable representation is dangerous. Establishing accountable representation without power is empty (Ribot 2002).

Effective decentralization is defined by an inclusive local process under local authorities empowered with discretionary decisions over resources that are relevant to local people. It is an institutionalized form of community participation (Ribot 2002).

The involvement and power sharing of different stakeholders could lead to different situations. What if people decide that they don't agree with conservation actions? Or, it could be possible that conservation organizations use participatory discourses as devices to legitimize control over resources with little relation to local interests or goals.

One way to avoid the problems of overexploitation or of new elites taking advantage of the natural resources is to allocate power to institutions that represent and are accountable to the populations for whom they are making decisions. Nonetheless, representative and accountable local institutions may also overexploit resources and ignore minority interests. For this reason, decentralization advocates are not calling for transfer of all decisions over natural resources to local populations. They suggest using environmental standards that specify the boundaries to the domain of local autonomy on how to use the resources. The central government would establish those standards. Other measures involve provisions to allow dispute-resolution mechanisms outside government agencies to facilitate the transition of decentralized environmental governance. Civic education is also important to assure that people know their rights and obligations, and the obligations of the government towards them.

Other authors suggest that to help conservation organizations and local communities become accountable, conservation actions should be part of a wider national (or in this case international) land use planning. This will help make local authorities accountable because they would have to fulfill the

requirements of the wider national plan (Secretariat of the Convention on Biological Diversity 2004).

Decentralization processes take time because it is not easy to establish the specific conditions for transferring powers and assuring accountable local institutions. But it is possible that practicing meaningful participation in projects like the Osa Biological Corridor may facilitate the conditions for starting to implement the principles of democratic decentralization which promise to be an interesting alternative for achieving biodiversity conservation and identifying alternatives for local development.

Further Research

Systematization of Case Studies of Conservation and Development Issues. As Brechin et al (2002) noted, there are a great number of case studies about the implementation of ICDPs around the world, but there is a lack of systematization that allows identification of the relevant issues about ICDPs and the factors that implementators should focus on in order to succeed in achieving the program's objectives. Systematic research is needed to start out understanding of the complexity of human and nature interaction.

Analysis of Marginalized Groups Involvement. Communities are not homogeneous entities; that is why it could be important for ICDPs to make efforts to identify the main groups and their interests in the communities where the project is working. Women's groups are an example of groups that projects usually do not consider. One way to start the identification of different groups'

interests is to focus on the analysis of the invisibility of women. Different methods like interviews, participant observation and life stories with women living in the project area could be used to fill information gaps about women's participation in and perspectives on the project. But it will be important as well to scale up and interview actors on different levels to identify the institutions that are preventing women from participating in natural resource management. Understanding the exclusion of women could help to reveal other groups' exclusions, and identify ways to help them voice their needs.

Collaborative Identification of the Problem. The other information gap involves how local community groups define the main problem for the area. Identifying how they perceive the area's problems could lead to identifying ways to overcome these problems, assessing how conservation and sustainable development goals can be achieved, what indicators can be used, and other inputs that could emerge. It would be interesting to put into practice the principles of dialogue[51] to help the understanding of the participants' point of views and overcoming mistrustful relationships. Some methods that can be used are focus groups with current members of the Local Osa BC Committee and people from other groups that have not participated in the project. This approach could be combined with individual interviews to analyze more in depth the issues raised in the focus group.

[51] See Yankelovich, D. 1999. The magic of dialogue. Transforming conflict into cooperation. Touchston. New York. 236 pp.

Identification of Willingness to Participate. It is important that ICDPs do not assume that people would participate only by inviting them. It is important to identify factors constraining or enhancing participation of local residents and different local groups. It is important also to research the sense of community and its influence on conservation (Zanetell and Knuth 2004). Quantitative methods can be useful to study correlations between the willingness to participate and other variables, like dependence on the resource, sense of community, the state of the resource and future concerns.

The Mesoamerican Biological Corridor has acknowledged the importance of different sectors of society to validate this project. That is why it is important to explore the opportunities that the MBC brings to grassroots and civil society organizations to help in the conceptualization and implementation of the project.

APPENDICES

Appendix A

The following table summarizes the key events highlighted in Chapter 2, regarding the history related to the establishment of protected areas in Osa Peninsula, focusing in the story of Corcovado National Park and Golfo Dulce Forest Reserve. The story starts after the arrival of transnational companies, reviewing the issues pertinent to the establishment of the Osa Biological Corridor.

Table A.1: Timeline of key events in Osa Peninsula

1930s	The Costa Rican Banana Company, a subsidiary of United Fruit Company, establishes plantations near Osa Peninsula causing a wave of migration
1937	Discovery of gold increases migration to the area
1959	OPF is officially registered, and government grants permissions for forestry and mining.
1962	OPF manager invites TSC staff to construct a research facility at Rincon, in the next eleven years over 1000 scientists and researchers visit Rincon and Osa
1963-73	U.S and Costa Rican conservationists define what portions of Osa to protect
1969-70	OTS works with TNC to acquire land from OPF.
1971	OPF turns to corruption, real estate scams and proposed tourism development
1971-73	National legislature committee conducts hearings into actions of OPF. They recommended the expropriation of much of OPF's land and creation of a reserve.
1972	OPF guards burn houses and shoot at peasants under the orders of new manager to regain control over OPF lands.
1973	OPF shuts down Rincon Research Station
1973	OPF guard is killed, probably by settlers
1974	WWF and TNC begin working closely together, intensifying efforts to raise funds to purchase Corcovado basin.
1971-75	Population in plain swells from five families in 1971 to 80 or 100 settlers in 1975, claiming the entire plain and surrounding hillsides
1975	CNP is established in October 31, 1975

1978-79	Establishment of GDFR. The government purchases land from OPF and ITCO
1980	CNP boundaries are expanded, more farmers are expropriated
1980	Migration to Osa after Costa Rican Banana Company ends workers' strike by closing operations in *Palmar* and surrounding area
1987	The government creates the National System of Conservation Areas (SINAC)
1988-94	BOSCOSA project implementation
1993	IDA decided to grant land titles to GDFR residents
1994	IDA reversed its decision, and decided that was illegal to grant titles in GDFR
1989	Ston Forestal Co began logging and reforestation process. Conflicts with environmentalists started.
1994	The government rescinded the contract with Ston Forestal to establish a port in *Golfo Dulce*
1994	Establishment of *Piedras Blancas* National Park
1999	Using *Fundación Cecropia* study, the government banned legal timber extraction in Osa Peninsula.
1999	Osa Fundraiser Campaign begins
2000	TNC workshop identified priorities for conservation of Osa Peninsula
2001	Osa Biological Corridor project started to be implemented

Sources: (Cuello, Brandon et al. 1998), (Rojas 2002)

Appendix B

INTERVIEW GUIDES

I. EXPLORATORY INTERVIEWS (June-July, 2003)

Members of the MBC National Commission

1. How would you describe the implementation of the MBC in Costa Rica?
2. How would you describe the regional coordination process? Has it been effective?
3. Does the MBC project (at regional and national level) have a gender equality policy? If yes, would you please describe it?
4. Please describe the decision-making in this project (at national level) as it relates to the project's main activities.
5. Is there a broad participation of different stakeholders in the project? Is there any consideration of women participation?
6. Some critics of the MBC argue that this project is the environmental counterpart of the Plan Puebla Panama, and that it could open the doors for transnationals to take advantage of the biodiversity in the region. Is there awareness in the Coordination Committee of these concerns?
7. How is the project handling the fears of the local populations, especially indigenous people, regarding land rights? And how about protecting indigenous knowledge?
8. What obstacles during the project implementation have been faced so far?
9. Do you have any suggestions of material (written, audio, etc) that could help me out with this research?

MBC Environmental Ministry

1. How would you describe the implementation of the MBC in Costa Rica?
2. Does the MBC project (at regional and national level) have a gender equality policy? If yes, would you please describe it?

3. Please describe the decision-making in this project (at national level) as it relates to the project's main activities.

4. Is there a broad participation of different stakeholders in the project? Is there any consideration of women participation?

5. Please describe the participation of the Environmental Ministry in this project? Is it included in the decision making process?

6. Some critics of the MBC argue that this project is the environmental counterpart of the Plan Puebla Panama, and that it could open the doors for transnationals to take advantage of the biodiversity in the region. Is there awareness in the Coordination Committee of these concerns?

7. How is the project handling the fears of the local populations, especially indigenous people, regarding land rights? And how about protecting indigenous knowledge?

8. What obstacles during the project implementation have been faced so far?

9. Do you have any suggestions of material (written, audio, etc) that could help me out with this research?

Members of the Osa Corridor Committee

1. How would you describe the implementation of the MBC in Costa Rica?

2. Could you describe in general the activities that are carried out by the MBC in Peninsula de Osa?

3. Do you know where I could access the strategic planning and conservation strategy, and other related documents?

4. How would you describe the regional coordination process? Has it been effective?

5. How would you characterize the national coordination of this project?

6. Does the MBC project (at regional and national level) have a gender equality policy? If yes, could you describe it?

7. Could you describe the gender equality policy for the Osa Corridor?

8. Could you please describe the project decision-making process in this project in Osa?

9. Is there a broad participation of different stakeholders in the project? Is there any consideration of women's participation?

10. Some critics of the MBC argue that this project is the environmental counterpart of the Plan Puebla Panama, and that it could open the doors for transnationals to take advantage of the biodiversity in the region. Is there awareness in the Coordination Committee of these concerns?

11. How is the project handling the fears of the local populations, especially indigenous people, regarding land rights? And how about protecting indigenous knowledge?

12. Has this project been effective in achieving conservation of biodiversity?

13. What kind of benefits are local communities in Osa receiving?

14. What obstacles during the project implementation have the project faced so far?

15. Do you have any suggestions of material (written, audio, etc) that could help me out with this research?

Local leaders in Osa

1. Have you heard about the MBC project? Could you please describe what you have heard?

2. Do you know what this project is doing in Costa Rica and in all Mesoamerica?

3. What is this project doing in Osa Peninsula?

4. Is this project helping the conservation of biodiversity in Osa Peninsula?

5. What are the benefits of the MBC for the communities in Osa?

6. Do you think this project could represent problems for the communities in Osa? Which could be those problems?

7. Do you know who coordinates this project?

8. Do you know how project decision-making in the MBC project in Osa takes place?

9. To what extent is the local population in Osa involved in the MBC?

10. How are women participating in this kind of project?

11. Do you think that women needs and responsibilities are taken into account in the MBC activities?

12. Have you ever though about how to measure how well the MBC is achieving its objectives?

13. Do you have any suggestions of material (written, audio, etc) that could help me out with this research?

Researchers

1. What has been your involvement with the MBC in Osa?

2. How would you describe the implementation of the MBC in Costa Rica?

3. Could you describe in general what are the activities carried out by the MBC in Peninsula de Osa?

4. Does the MBC project (at regional and national level) have a gender equality policy? And the Osa Corridor? Could you give a brief description of those, and refer some written materials about it?

5. Could you please describe the project decision-making process in this project in Osa?

6. Is there a broad participation of different stakeholders in the project? Is there any consideration of women participation?

7. Some critics of the MBC argue that this project is the environmental counterpart of the Plan Puebla Panama, and that it could open the doors for transnationals to take advantage of the biodiversity in the region. Is there awareness in the Coordination Committee of these concerns?

8. How is the project handling the fears of the locals, especially indigenous people, regarding land rights? And how about protecting indigenous knowledge?

9. Has this project been effective in achieving conservation of biodiversity?

10. What kind of benefits are local communities in Osa receiving?

11. What obstacles during the project implementation have been faced so far?

12. Have you ever though about indicators that could measure how well the project is doing?

13. Do you have any suggestions of material (written, audio, etc) that could help me out with this research?

II. FOLLOW-UP INTERVIEWS (December 2003 – January 2004)

I.1 Concept of participation

- What do you understand about participatory approach?
- What is your organization's concept of participation?
- Why is important for a conservation project to be participatory?
- How the Osa BC describes its participatory approach and what part does the Local Committee play on it?

I.2 Variables to describe the participatory approach

1. Degree of participation

In the literature (Campbell and Vainio-Matilla 2003), there is no one meaning of participation, but it can be described as positioned in a continuum from manipulating participation for the achievement of externally identified project goals to the empowerment of the actors to define such goals themselves.

- Regarding the continuum of participation, where on that is the project?
- Do you agree with this continuum?
- What are the pros and cons of both extremes of the continuum?
- What is the best option on the continuum?
- What is the mechanism that allows different people to get involve in the project?
- What are the factors that prevent people (of different ethnicity, gender, background) to get involved in the project?
- What is the role of land tenure on the achievement of meaningful participation?
- Do people take advantage of the opportunities to participate?
- How do people get informed of the project's actions?
- What is the percentage of actors involved in the decision-making process in this project?

2. Definition of objectives

- Who and how was decided to establish a biological corridor?

- Why BC are a good alternative for the region's development?
- What has to be accomplished to consider the Osa BC a successful project?
- If the project needs to prioritize between either a conservation action or a development activity, which one will choose?
- Would the different actors of the project agree if the option were given to use the protected areas resources?

3. Actors relationships and expertise of promoters
- Can the intended beneficiaries influence the conception, design, implementation, operation distribution of benefits and maintenance of the project?
- How is the decision making process? Consensus? Whose interests come first?
- Are the implementing agencies rooted in the nation?
- Is there mutual accountability among the various actors?
- For how long have the various actors been active in working in the area? And in the project?

4. Influence of international actors
- What is the participatory strategy of the international NGOs involved in the project?
- What influence do they have on the decision-making processes?

5. Incorporation of local knowledge
- Has the project any means to document and systematically explore local knowledge of natural resources use?
- Are there any local monitoring initiatives to gather biological information?

6. Interests and discourses in the project
- What is the main reason why you got involved in this project?
- What do you know about what moved the other people to be involved in this project?

Appendix C

Table C.1: Topics from interviews and their respective code

Topics	Codes
1. Concept of Osa BC and MBC	**CONC**
2. Osa BC socio economic context	**HIST**
3. Critics to MBC	**MBC**
4. Osa BC objectives a. Project's main objectives and definition of those objectives	**OBJ**
5. Osa BC activities	**IMPLEMEN**
a. Main activities	
b. Project's general strategy	
c. Prioritization between conservation and development activities	
d. Tourism	
e. Madera caida	
6. Payment for Environmental Services	**PSA**
7. Limitations of the project	**LIMITCBO**
a. Project's local and national acceptance	
b. Local's fears	
c. Impact of previous protectionist – conservationist activities (SIPRAICO, RFGD)	
8. Incorporation of local knowledge	**LOCALKNW**
9. Local perceptions of conservation actions, and the CBO project	**LOCALPERC**
10. Participation of NGO's (technical coalition) and criticisms	**PARTIC-ALL**
11. Decision making process within the project	**DECIS**
12. Characteristics local committee's participation	**PART-LCOMM**
a. Committee beginnings	
b. Decision making	
c. Opportunities to participate	
d. Communication strategy	
e. Vision of the committee in 5 years	
13. Characteristics of government's participation	**PARTIC-GOB**
14. Women participation in the project	**WOMEN**
15. Confidence among actors	**TRUST**
16. Perceived limitations to participation	**LIMIT-PARTIC**
17. Opinions about challenges for promoting sustainable development in the Peninsula and the role of the project and local committee	**PEN-DEVEL**
18. Organizations and personal to participate	**DISCOURSES**
19. Project's benefits to surrounding communities.	**BENEFIT**
20. Influence of international organizations	**INTNALORG**
21. Relationship with MBC national and MBC regional	**REL-MBC**
22. Opinions about how could the project be sustainable	**SOST**

Table C.2 Links between the research questions, the analytical issues and the topics from the interviews

Analytical Issues from literature	Code – topic
Question: Who are involved in the Osa biological corridor project, what are their interests and reasons for their involvement?	
Different discourses	LOCAL-PERC INTNALORG DISCOURSE
Question: What is the Osa biological corridor strategy to achieve biodiversity protection and promoting sustainable development in the area?	
Concept of ICDPs, as biological corridors	CONC OBJ HIST MBC REL-MBC
ICDPs limitations	CONC OBJ LIMIT-CBO PEN-DEVEL BENEFITS LIMIT-CBO
Alternatives to ICDP	PSA SOST
Question: What is the concept of participation that is promoted in the Osa biological corridor?	
Conceptualization and characteristics of the participatory approach	PART L-COMM PARTIC-ALL PARTIC-GOB
Question: How are people participating in this project, what factors may prevent others to participate?	
ICDPs end objectives	OBJ TRUST LIMIT-CBO LIMITPART
Relations among actors	TRUST LOCALPERC LIMITPART
Participatory exclusions	WOMEN PARTIC-ALL PART-LCOMM
Land tenure and willingness to participate	LIMITPART
Question: What are the implications of the MBC regional project on the Osa BC project implementation?	
(Several issues)	REL-MBC

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