Conservation versus Artisanal Gold Mining in Corcovado National Park, Costa Rica: Land Use Conflicts at Neotropical Wilderness Frontiers

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Abstract
Costa Rican subsistence farmers have traditionally relied on the forest frontier for survival and independence. This case study examines a conflict at Corcovado National Park, where conservationists prohibited access to a "last" forest frontier by inducing the government to evict over 800 artisanal gold miners in 1985. During subsequent interviews miners cited landlessness, unemployment and a desire for independence as reasons for invading the park. Most miners and other local residents perceived the forest to be immense and indestructible, and could not identify tangible economic benefits from its conservation. Following the eviction, the Costa Rican government worked to resolve the conflict through financial compensation and resettlement, requiring years of legal negotiation and millions of dollars in cost. Nonetheless, miners continue to invade the park illegally and at times violently confront park personnel. Beyond specific management problems related to gold mining, the conflict at Corcovado resembles those at park boundaries elsewhere in Latin America where open forest frontiers no longer exist. Resolving these conflicts requires policy change to integrate parks and other conservation areas into local economies and provide alternatives for farmers unable to find land or employment.
Key Words:*Conservation and development, forest frontier, Costa Rica, mining, environmental attitudes.*

The accelerated loss of natural ecosystems in the tropics signifies not only a dramatic reducction in biological diversity but potentially threatens the maintenance of global ecological processes. In response, conservationists work to set aside remaining wilderness areas as national parks and reserves. Currently, approximately 4.4 percent of Latin America's land area is designated as "protected", the majority of which is located in frontier zones (World Resources Institute 1992, 20). Despite the official protected status of the parks, they still experience deforestation and the uncontrolled exploitation of biological resources. When protected areas are maintained, conflicts over user rights intensify along park boundaries. Thus, as resource frontiers recede, the immediate needs of resource extractors inevitably collide with long term conservation goals.

Environmentalists celebrate Costa Rica for dedicating over twelve percent of its territory to national parks and reserves (World Resources Institute 1992). Throughout the 1980s it received the highest level of international conservation investment per area of any tropical country (Abramovitz 1991). But international support has not been sufficient to curb traditional land use practices. Between 1981 and 1988, deforestation in Costa Rica proceeded at a rate exceeding all other Latin American countries in terms of percentage loss of total remaining forest (World Resources Institute 1992, 19).

Located in southwestern Costa Rica, Corcoovado National Park provides a case study of conflict between conservationists and local community members over land use at a forest frontier (Figure 1). Here gold mining activities threaten the maintenance of extraordinary biological diversity. Such conflicts are common in the tropics. Mining threatens 38 percent of national park units in less developed countries (Machlis and Tichnell 1985:85). As a typical frontier land use, mining often represents a reasonable alternative for subsistence farmers unable to acquire arable land or employment (Clearly 1990). Interviews with local

community members about the conflict at Corcovado National Park reveal land use decisions and attitudes resulting from a traditional reliance of subsistence farmers on the forest frontier for survival and independence. This case study provides insight for those working to integrate conservation and development in Latin America's remaining natural forests. **[end p.47]**

STUDY SITE-PHYSICAL CHARACTERISTICS AND DEVELOPMENT HISTORY

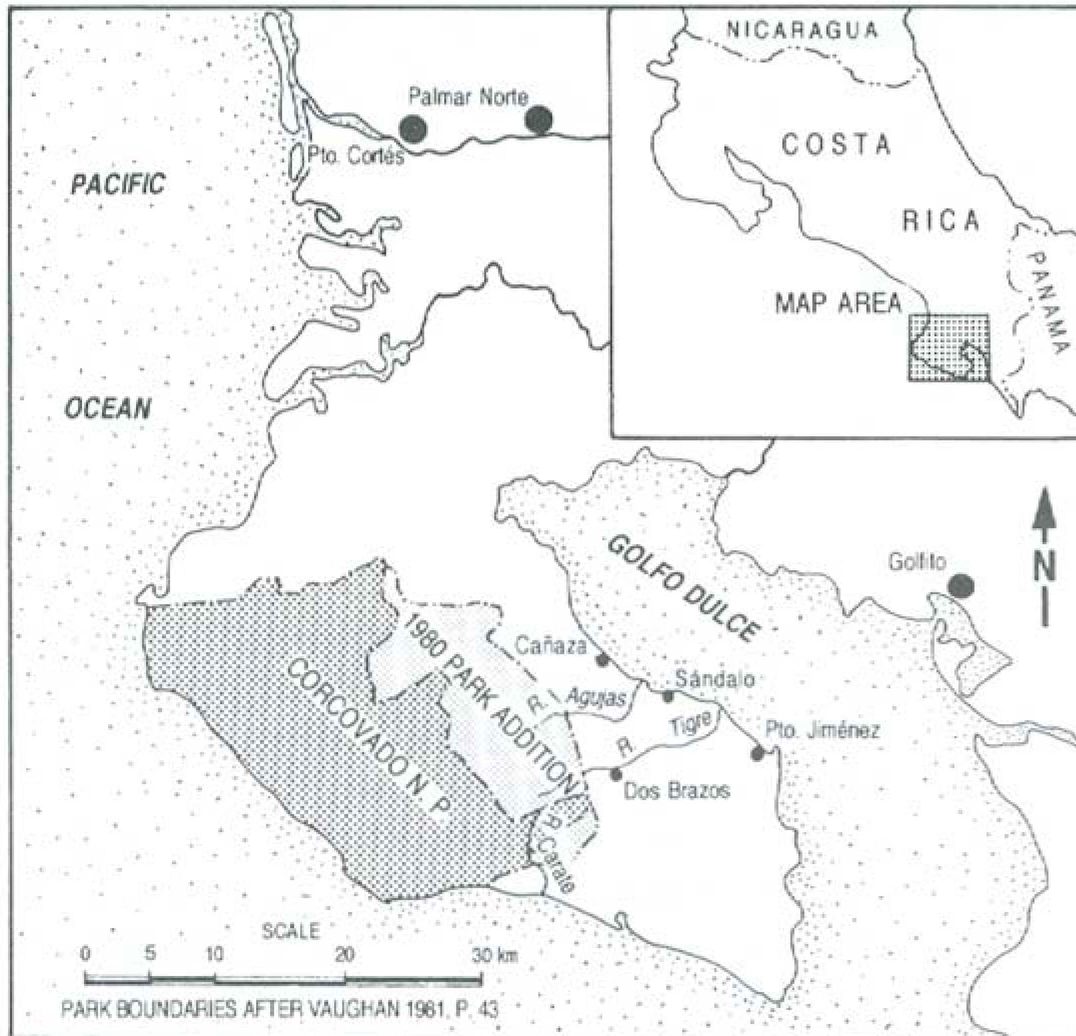


Figure 1. The Osa Peninsula and Corcovado National Park.

The relationship between Corcovado National Park and its surrounding communities is shaped by the physical characteristics of the Osa Peninsula, where the park is located. Unique physical features of the peninsula caused it to be one of the last areas in Costa Rica to be settIed and curbed the total conversion of the natural ecosystem. The Osa Peninsula encompasses 150,000 ha., 80 percent of which is characterized by steeply dissected topography and poor soils. Precipitation averages between 4,000-6,300 mm/year, and tropical wet forest is the predominant life zone. Despite the peninsula's limited agricultural potential, the natural ecosystem is especially rich in plant and animal species. Differences in topography, elevation,

microclimate, soils and drainage have created an extraordinarily complex system of more than 15 vegetative communities and an exceptionally diverse fauna (Vaughan 1981).

Placer gold deposits in the gravels of most of the peninsula's major rivers have long attracted miners. The richest deposits are located in the older terraces within the mountain valleys and in the alluvial fans where rivers reach the lowwlands (Berrange 1987). Gold mining was an important activity for the indigenous people of the Osa Peninsula between 700 A.D. and 1550 A.D. (Berrange 1987) but diminished after the Spanish conquest drastically reduced the indigenous population (Denevan 1976).

Fewer than 200 subsistence farmers inhabited the peninsula until the 1940s when the United Fruit Company brought infrastructure and employment opportunities to nearby Palmar Norte (Lewis 1984). By the 1960s extensive cattle ranching and rice production were established on the peninsula. These agro-export activities expanded to occupy the most fertile land available. Logging was initiated by a North American company during the 1970s.

In 1974 foreign companies began mining the major rivers in the southern third of the peninsula (Río Carate, Río Tigre and Río Agujas) using heavy machinery (Figure 1). Their· methods, largely unmonitored by the Costa Rican government, "totally destroyed" the rivers from what is now the park boundary to the ocean (Janzen, et al. 1985, 32).

The peninsula's development has been poorly planned and lags behind other regions; hence its reputation as Costa Rica's lawless, wild west. The area has experienced the boom and bust cycles typical of frontier economies. In a government evaluation of wealth and welfare, the peninsula was ranked the poorest region in the country (Hall 1985, 276). Eighteen percent of the population over age ten is illiterate (Costa Rica 1984), compared to a national average of less than ten percent. Unemployment in the peninsula and neighboring regions aggravated these conditions. In 1984 the United Fruit Company left nearby Palmar Norte (Figure 1) and approximately 4,000 people lost their jobs (Clyde Stevens, pers. comm. 1988). By this time, the population on the peninsula had surrpassed 6,000 (Costa Rica 1984).

Corcovado National Park was created in 1975 to preserve 35,000 hectares of wet tropical forest of extraordinary biological diversity. The park represents the largest tract of rainforest remaining on the Pacific coast of Central America (Janzen, et al. 1985; Vaughan 1981). After declaring the area a national park, the government evicted 330 subsistence farmers residing in the coastal lowlands and compensated them with land or money. The government allowed ten gold miners to stay, on the basis that they were "quaint, harmless members of the natural ecosystem" (Boza and Mendoza 1981:241). Five years later, the Costa Rican park service expanded Corcovado National Park to 42,000 hectares in order to include **[end p. 48]** unique areas of oak cloud forest and to protect the drainage basins for all the park's rivers. The area annexed is a gold-rich zone that was at the time inhabited by another 50 miners. By 1985, over 200 miners worked in the annex (Janzen, et al. 1985,6). This annex remains a subject of controversy; many local residents refuse to acknowledge it as park property.

During the first ten years of the park's existence, conservationists made little effort to integrate their management activities into the local economy. Between 1979 and 1985, approximately 325 tourists visited Corcovado annually, 75 percent of whom were foreigners paying private companies to fly them into the park (register of Costa Rican National Park Service). While these tourists annually generrated $541,581 of revenue within Costa Rica (Kaye, personal communication 1985), little of this money directly reached the inhabitants of the peninsula.

Development of the Conflict with Gold Miners

Between 1980 and 1985 a combination of factors including high unemployment, scarcity of arable land and

skyrocketing gold prices caused a flood of over 800 miners into Corcoovado National Park (SPN 1985). Some sources indicate that prior to the 1986 eviction, over 1,500 individuals frequently worked within the park boundaries (Janzen, et al. 1985).

The miners used a variety of methods to extract gold in the park, ranging from traditional (artisanal) panning to the use of more sophisticated technology including trenching, diverting river courses, and ground sluicing. Using these more intensive methods, two miners working with assistants typically exxtracted approximately 1 to 3 g. per day (l g. = approx. $10.00 in 1985) (Berrange 1987, 406). A few miners used gasoline-powered pumps to wash large volumes of sediment, however park administrators discouraged this by confiscating their pumps.

The miners' presence was virtually sanctionned until 1985, when a team of scientists commissioned by the World Wildlife Fund concluded that the miners were destroying the aquatic life of the park and threatening the integrity of the entire natural ecosystem (Janzen, et al. 1985). The damage they identified included heavy sedimentation of streams and alteration of light and temperature regimes of the riparian forest due to landslides and clearing of the canopy along stream banks. Mining caused 80 percent of the observed landslides (Janzen, et al. 1985: 25). The team estimated that two miners working with assistants could destroy a "medium size stream" for 2 to 1 0 kilometers downstream while disrupting migratory processes of stream organisms at a larger scale. Recovery would require "10s to 100s to 1000s of years" (Jannzen, et al. 1985). They also observed that all large seed-dispersing mammals such as agoutis, peccaries, and tapirs were missing within the mined area of the park.

Acting on the conclusions of this report, the Costa Rican National Park Service (SPN) evicted the miners in February of 1986 with the support of the National Rural Guard and funding from international conservation groups such as World Wildlife Fund. Approximately 500 miners left the park voluntarily while the Rural Guard arrested and forcibly removed 218 individuals. The government subsequently provided the miners with food and housing in nearby Golfito for over nine months at a cost of over $18,000 per week (SPN 1987a). Government officials and conservationists proposed land parcels, money and membership in mining cooperatives to compensate the miners. None of the various national organizations involved, however, agreed to assume responsibility for the miners' welfare. Meanwhile the miners became increasingly angry over their rudimentary living conditions and organized hunger strikes and protest marches while threatening to re-invade the park. The SPN was forced to send one-fifth of its employees to the peninsula to patrol the park and build guard posts. It was during this tense period that interviews were carried out with dislocated miners, local merchants, agriculturalists, and government employees.

INTERVIEW METHODS

The majority of local community members around Corcovado National Park were wary of being approached by anyone seeming official (especially a foreigner) and were aware of the illegal nature of mining in the park. Considering these factors as well as the relatively high rate of illiteracy (19 percent), the participant-observer approach was used. This required the researcher to establish familiarity with the study group before conducting in-depth, unstructured interviews. Cooperation from the local veterin **[end p. 49]** arian, school teacher, nurse and a prominent merchant proved to be invaluable in gaining some trust from the community. During each interview the same series of open-ended questions was asked, which served to structure what usually developed into an extended connversation including anecdotes about life in and around the park and personal histories. Interrviews lasted an average of four hours, often carried out as a series of informal visits over a period of several days. and were recorded.

In order to survey the range of attitudes in the population, the respondents were divided into four representative groups involved in the park-community conflict: gold miners (36 interviewed). agriculturalists (16). merchants (14) and government employees (5), for a total of 71 interviews (58 male and 13 female).

Individuals were classified by their major source of although they often participated in both farming and mining activities. More gold miners were interviewed than merchants or agriculturalists as they were most immediately influenced by the park's existence.

Interviews were carried out during May-September of 1986 in the communities of Puerto Jimenez. Cañaza and Dos Brazos, located along the southern border of the park (Figure 1). Additional gold miners were interviewed in Golfito where they received food rations and temporary shelter. In each of these locations respondents were selected by approaching every third dwelling for an interview. Other individuals who played significant or unique roles in the community were also interviewed (e.g. largest landholder or popular leader of the gold miners).

INTERVIEW RESPONSES

The interview results are presented according to two categories: (A) origins of the park/mining conflict, and (B) community attitudes toward the park. Much of the information collected was extensive and highly qualitative in nature. Thus, only responses to six key questions are presented in detail (Table 1). Additional inforrmation and exemplary quotes from the interviews are woven into the discussion section which follows.

Origins of the conflict

Extensive interviews with 36 miners explain in part why over 800 individuals entered Corcoovado National Park to mine its gold. The majority of the miners interviewed (70 percent) were from Costa Rica's rural sector. having worked as rural wage laborers, small scale farmers and ranch hands. The fact that over 50 percent of the miners arrived during the past seven years and 90 percent during the last 20 years is partly due to improved access to the peninsula. but it also reflects the growing land shortage and rural unemployment throughout Costa Rica.

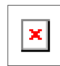
Narly one-half of the miners were originally from Guanacaste, a province where over 70 percent of arable land is dedicated to cattle ranching, a low-labor production system (Edelman 1992. Place 1985). Guanacaste is the only agrarian province experiencing net emigration (Hall 1985); in fact Guanacastecans are involved in land invasions throughout Costa Rica (Seligson 1980). Twenty-five percent of the miners interviewed were formerly employed by the banana company in the Palmar reegion. These results compare with official census figures indicating that the majority of the miners were former farmers, 50 percent of whom had previously worked as *peones agrícolas* (rural wage laborers); 37 percent as ranch hands and twelve percent as employees of the banana company.

In describing their previous work in the rural sector, miners cited problems of land unavailability, unemployment or low-paying job, debt, and oppressive bosses. These individuals represent an especially marginalized group within the agrarian economy due to their low level of education, lack of financial resources (only ten percent had ever obtained loans). and alcoholism (Miranda and Rivera 1986). The miners' inability to support themselves after the eviction further reveals their disadvantaged status.

Although they experienced physical harddships, the majority of miners valued their lifestyle in the park for its great level of freeedom. For many of them mining represented their first opportunity to support themselves by working independently, as opposed to being employed as rural wage laborers. Miners freequently stated "In the park there is no *patrón* [boss]. In the park we lived without debts or commitments to anyone." Moreover, more than half of the miners described their lives in the park in heroic terms and boasted of their resilience and enjoyment of nature. While all the miners came to the park hoping to strike it **[end p. 50]** rich, only one miner identified gold mining as an economically stable occupation. The miners' romantic self-image resembles that of frontier settlers elsewhere in Costa Rica (Dobles 1950), and differs dramatically from the connservationists' portrayal of the miners as destroyers of nature.

Most miners entered the park because of landlessness or unemployment. This personal survival strategy reflects a national trend, where peasants respond to population growth and consolidation of land in the hands of large agro-export farmers by becoming wage laborers or by moving to unoccupied land at the forrest frontier. There they experience harsh living conditions but also more personal freedom (Augelli 1987). Other individuals chose mining to supplement their farm income.

These reasons to mine in the park are in keeping with traditional Costa Rican attitudes toward forested land. According to Williams (1986, 117) "the existence of vast untapped areas of forest has provided a crucial protection for the peasant system, a safety valve for a whole way of life." Land was considered free and abundant for most of this century and frontier expansion proceeded in all directions outward from the Meseta Central. The government encouraged squatters to clear public forest by giving ownership to any farmer who cleared and worked the land for more than ten years. Those residing fewer than ten years on a parcel were also paid by the government for any land 'improvements," i.e., felling of trees. The use and occupation of land was considered more important than formal land titles, and a whole class of people (*precaristas*) evolved who survive by invading forested land and then demanding compensation as accorded by laws protecting squatters' rights (Seligson 1980).



Beginning in the 1950s, with the expansion of pasture land and rapid population growth, squatters were forced to settle in more remote areas and on land that was inappropriate for farming. By 1977, 3.5 percent of the population owned 63 percent of the land and the nummber of landless peasants surpassed 150,000, or approximately 25 percent of the rural population (Guess 1979, 45). Deforestation accelerated. By the end of the 1970s, the freely accessible forest frontier had been exhausted and the remaining forests were located in naational parks and reserves or were held as priivate property (Augelli 1987, 14). Costa Rica **[end p. 51]** began its precarious and sometimes violent transition from a system based on limitless land to one in which land is scarce.

The peninsula's problems with land scarcity and rural unemployment mirror a national trend. Large ranches and rice plantations (500-2,000 hectares) owned by a few dozen individuals dominate the peninsula while subsistence farmers invade the forest reserve adjacent to Corcovado National Park or farm on marginal land. The departure of the banana company severely depressed the regional economy. During interviews, community members described the departure of the company as the first blow to the area, and the eviction of the miners from Corcovado National Park as the second. Over 70 percent of respondents considered the local community to be in an economic crisis due to the recent eviction of the gold miners. The amount of gold purchased in Puerto Jimenez fell 60 percent following the eviction, a loss of approximately $790,000 in annual gold purrchases (Banco Central 1988).

The interviews indicate that mining in Corcovado National Park represented a rational alterrnative for individuals unable to find land or jobs in the rural sector. The forests of Corcoovado, and especially their gold, served the safety valve function identified by Seligson (1980), Augelli (1987), Hall (1985), and Williams (1986) for those struggling to survive in a system dominated by export beef and banana prooduction. Williams' description of land use conflicts throughout Central America is easily applied to the situation on the Osa Peninsula: "The receding edge of the tropical forest became the setting of a conflict between two incompatible systems of land use, one driven by the logic of the world market, the other driven by the logic of survival" (1986, 151).

Significance of Local Attitudes toward the Park
The overwhelming majority of respondents was quick to identify as "pro-park." That is, they acknowledged

wildlife preservation as a valid goal. However, only government emmployees and the more educated agriculturalists were able to identify other park values. None of the respondents mentioned the park's exceptionally high species diversity or its unique status as the last large coastal Pacific rainforest in Central America. I was often asked: "Why don't they build Corcovado elsewhere?"

The fact that a majority of respondents identified North Americans or the Costa Rican government as the beneficiaries of the park demonstrates the local population's alienation from its goals and reflects the community's suspicions that a lucrative business transaction occurred between the Costa Rican Government and foreign companies, with local residents losing out. Only eleven percent of the respondents could identify local community benefits from the park, this primarily being" a source of pride."

Another major factor which intensifies community-park conflict is that the majority of the community members (58 percent) believed that the miners' activities were not damaging the park, particularly when compared to the impact of a heavy storm or the damage caused by mining companies using heavy machinery. The fact that the Costa Rican government has publicly encouraged mining companies to locate and extract gold elsewhere in the peninsula fuels the miners' suspicions that mining rights within the park had been sold to North Americans. Those respondents who did believe that miners damaged the park (27 percent) identified hunting or felling trees as the problem, not mining itself. Most respondents considered Corcovado's streams to be too long and widing to be affected by the miners' low technollogy extractive activities. Furthermore, they perceived the park to be immense and invulnerrable, and made statements such as: "The forest hurts us more than we could ever hurt it."

Other perceptions furthered community resentment of the miner's respondents commonly expressed the belief that, as Costa Ricans, the miners were cheated out of what was theirs to exploit freely. This attitude has its roots in the traditional belief identified by Augelli (1987), Williams (1986) and many others that all Costa Rican are guaranteed the right to use the forest (i.e. "unoccupied" land) to support themselves. Therefore, cutting off access to the park's natural resources was viewed by many as equivalent to selling a piece of Costa Rica to foreigners. In sharp contrast to this perspective, government employees and large landholders stated that the park preserved Costa Rica's heritage.

EFFORTS TO RESOLVE THE CONFLICT

On December 9, 1986 representatives of the miners and the Costa Rican government signed **[end p.52]** an agreement in which any miner who had no other means of support, who had proof of his or her mining experience in Corcovado Nationnal Park, who was in good standing with the Institute of Agrarian Development (IDA), and who had not reinvaded the park (and promised never to do so) would receive a land parcel near Sandalo (Figure 1) or compensatory payment of approximately $4,500 (SPN 1987a). Over 100 miners were paid and 92 received land parcels, but a large group remained who did not qualify or did not accept the terms of the agreement. In March 1987, one year after the eviction, approximately 300 miners marched 226 km to San José to demand compensation, camping in front of the presidential residence and in city parks. On April 13, 1987, a second "final" agreement was established in the national legislature which designated $1.5 million for distriibution among the remaining miners under conditions similar to the December 1986 agreement (Imprenta Nacional1987). One hundred individuals received payment while those who did not began hunger strikes and invaded the National Cathedral in protest (*La Nación* 1987). On November 9, 1987, another 150 miners were paid approximately $3,000 each (La República 1987). The 76 remaining 'miners' (by this time they were accompanied by other homeless individuals) were subsequently evicted from the San José Central Park.

Observations recorded during subsequent visits to the peninsula during 1990 and 1992 indicate that conflict between miners and the park has not been entirely resolved. Between 100 and 200 miners have been arrested in the park during each year since the eviction (MIRENEM personal communication 1992). This

number represents perhaps only 20 percent of the actual number of individuals who continue to work illegally in the park on a frequent basis (MIRENEM personal communiication 1992). Park guards at Corcovado estimate that at anyone time, approximately 50 miners work in a 15,000 ha. area of the park (A. Araya personal communication 1990). Morale among the park guards is low due to their militaristic and unpopular role among the mining community. Night patrols of the park are particularly dangerous.

Destruction of Corcovado's ecosystem by the miners has been greatly reduced and the Costa Rican government has publicly demonstrated its commitment to protecting the park. In this regard, the eviction was a success. The proocess, however, has been very expensive in terms of financial, personnel, and administrative investments. The 1992 protection budget for Corcovado National Park is approximately $290,000 (MIRENEM 1992). Few state institutions responsible for parks in other Latin American countries have the capacity to invest in protecting a single park at this level.

CONCLUSIONS

The tediously slow and controversial attempts to resolve this conflict prove how difficult it is to enforce conservation strategies against the wishes of a major sector of a local community. Preventing the exploitation of Corcovado's forest frontier caused economic hardship for a group already marginalized from the agrarian sector and also signaled a formal rejection of the traditional frontier lifestyle as a viable subbsistence strategy.

Janzen, et al. (1985) warned against the creation of national parks as "wilderness fortressses" on the Costa Rican landscape. Corcovado National Park in many respects resembles a fortress, complete with armed patrols and furtive invasions of desperate miners. Some observers might conclude that the miners should be allowed to work in the park under a controlled system. However, allowing miners to destroy Corcovado's forest as they compete for the remaining gold would at best only temporarily alleviate the community's economic depression. Furthermore, such a short-sighted solution would mean the loss of a unique naturral ecosystem. Damage to the integrity of the Costa Rican park system would also be unaccceptably great.

At the local level, the answer to this dilemma lies in protecting Corcovado's ecosystem while continuing to strive for economic and social integration of the park into the community. **[end p. 53]**

Major initiatives are underway to achieve this integration. Corcovado now forms part of a 150,000 ha. management unit called ACOSA (Area for Conservation and Sustainable Development Osa). With substantial support from international development agencies and environmental NGOs, the peninsula is now inundated with projects such as environmental education, natural forest management, agroforestry, and commercial furniture production. Tourism in the park has increased 20-fold since 1985, with 9,000 visitors expected for 1993 (MIRENEM 1992). Tourism revenue may help government institutions recoup some of the cost of protecting Corcovado. Only a few ex-miners currently work in tourism, however (Jones, personal communication 1992). While independent character and physical stamina are traits of a successful artisanal miner, they do not necessarily make an individual employable within the international ecotourism industry. The successful establishment of mining cooperratives on concessions outside the park is likeewise hindered by the miners' preference to work as autonomous individuals. Many minners have abandoned or sold the land parcels they received as compensation, presumably because the soil was of poor quality. Ultiimately, it will be difficult to provide miners with economic alternatives that can provide a level of independence comparable to mining in the park

The integration of forest management and tourism activities into the local economy is critical to the survival of Corcovado Park. Landuse reform at the national level, however, will be necessary for long-term conservation of remaining forests in Costa Rica. Beyond specific management problems related to gold mining, the issues involved at Corcovado parallel those for parks elsewhere in Costa Rica. No long "un-

occupied" forests. Nor can they choose to mine gold in the forest as an activity that offers greater independence than alternatives in rural or urban wage labor. Costa Rica must now resolve basic problems of land scarcity and unemployment in its agricultural system withhout relying on the forest frontier. Allowing uncontrolled exploitation of Costa Rica'sparks would only temporarily relieve the plight of the growing number of landless farmers.

As deforestation proceeds at frontiers elsewhere in Latin America, land use conflicts similar to the case of Corcovado will occur along park boundaries. Many parks in South America are particularly threatened by gold mining, at both artisanal and industrial levels. These parks will inevitably require active protection; however, few state institutions in other countries have the capacity to invest in protecting a single park at the level Costa Rica devotes to Corcovado. Early, concerted efforts to integrate parks into local economies may help to avoid situations requiring evictions, armed conflict and other emergency measures. At a broader level, policy reform is necessary to curb land speculation at forest frontiers and to provide economic alternatives to landless farmers. In attempting to resolve land use conflicts at park boundaries in Latin America, conservationists must contend with traditional land use practices and attitudes which evolved within a frontier setting that no longer exists.

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Resumen
Tradicionalmente los campesinos costarricenses dependieron de la frontera selvática para subsistir y mantener una vida independiente. Este estudio de caso examina un conflicto en el Parque Nacional Corcovado, donde los conservacionistas persuadieron al gobierno de prohibir acceso de 800 mineros artesanales a una "última frontera," sacándoles del parque. Entrevistas con mineros y otros vecinos de la zona mostraron que escaséz de tierra, falta de empleo, y el deseo de tener una vida independiente motivaron la invasión del parque. La mayoría de los mineros y otros vecinos de la zona creen que la selva es enorme y indestructible, y no pudieron identificar beneficios económicos tangibles de la conservación del parque. Después de la expulsión de los mineros del parque el gobierno costarricense hizo esfuerzos de resolver el conflicto por medio de compensación finannciera y reubicación de los mineros en otros terrenos, un proceso que costó años de negociaciones y millones de dólares de gastos. Sin embargo, los mineros siguen invadiendo al parque ilegalmente y, a veces, enfrentando violentamente a los guardianes. Aparte de los problemas especfíicos relacionados con los oreros, el conflicto de Corcovado se asemeja a otros conflictos latinoamericanos en los limites de parques y reservas don de las fronteras agrícolas dejan de existir. Resolver estos conflictos requiere cambios de las políticas de administración de parques y reservas que sirven para fomentar el proceso de integrarlos en las economías locales y ofrecer alternativas para los campesinos que carecen de tierra y empleo.
Palabras clave: *conservación y desarrollo, frontera del bosque, Costa Rica, minería, percepciones ambientales.* **[end p. 55]**