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# Forest-Dwelling Native Amazonians and the Conservation of Biodiversity: Interests in Common or in Collision?

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**Abstract:** *Although concern for biodiversity and its conservation originated in the biological sciences, with growing international interest an increasing number of interest groups are claiming standing in discussions of the best ways to conserve biodiversity. One of these groups, formed by various indigenous peoples and their advocates, has repeatedly defended its claim to standing by stating that indigenous peoples are well equipped to conserve biodiversity. These claims have had far-reaching consequences, as millions of hectares of Amazonian forest have been deeded to indigenous groups, at least partially on the reasoning that such actions would conserve biodiversity. In this paper, we bring to the attention of the community of conservation biologists a group representing 229 native Amazonian groups comprising 1.2 million people in Peru, Bolivia, Ecuador, Brazil, and Colombia. In a document entitled "To the Community of Concerned Environmentalists," this group of indigenous peoples proposes a broad template for cooperation between conservation biologists and the indigenous peoples of the Amazon Basin. Following reiteration of the statement, we discuss the fact that these two groups define biodiversity and its conservation in different ways, with indigenous peoples focusing more on preservation of general habitat characteristics and exclusion of extensive habitat alteration. We conclude that the interests of conservation biologists may not be*

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Habitantes nativos de la selva Amazónica y la conservación de la Biodiversidad: Intereses en común o en conflicto?

**Resumen:** *Si bien el interés por la biodiversidad y su conservación se originó en las ciencias biológicas, con el crecimiento del interés internacional, un creciente número de grupos de interés está reclamando posiciones en discusiones respecto a los mejores caminos para conservar la biodiversidad. Uno de estos grupos, formado por varias poblaciones indígenas y sus defensores, han sostenido repetidamente sus reclamos con respecto a su posición de que la población indígena se encuentra bien equipada para la conservación de la biodiversidad. Estos reclamos han tenido consecuencias de largo alcance, como los millones de hectáreas de la selva Amazónica que han sido cedidas a grupos indígenas, al menos parcialmente bajo el razonamiento de que tales acciones conservarán la biodiversidad. En este trabajo, nosotros presentamos a la comunidad de biólogos conservacionistas un grupo representativo de 229 grupos de nativos del Amazonas, los que comprenden 1.2 millones de la población en Perú, Bolivia, Ecuador, Brasil y Colombia. En un documento titulado "Para la Comunidad de Ambientalistas Interesados" este grupo de indígenas propone un amplio espectro de cooperación entre biólogos conservacionistas y poblaciones indígenas de la cuenca del Amazonas. Siguiendo este planteamiento, nosotros discutimos el hecho de que estos dos grupos definen biodiversidad y*

*completely compatible with the agenda of indigenous peoples and their advocates but that by cooperating, valuable time is being bought by both sides.*

Biodiversity as a term and as a concept has its roots in the field of conservation biology. The first and strongest advocates for biodiversity conservation were biologists; the published experts on biodiversity are mainly biologists; the organizations that sponsor publications on biodiversity have primarily a biological focus: Wildlife Conservation International, the World Wildlife Fund, the International Union for the Conservation of Nature, and the National Academy of Sciences; and the journals that publish articles on biodiversity are written primarily by and for biologists and environmentalists.

In recent years, however, as biodiversity has moved from an academic working concept to a global concern, many people other than biologists have claimed standing in the arena of biodiversity (Redford & Sanderson 1992). In this paper, we wish to bring to the attention of the community of conservation biologists one of the groups of people with intense interest in the issues of biodiversity conservation—a group for which the issues are far from academic—the indigenous peoples inhabiting the rain forests of the Amazon basin.

An organization representing 229 native Amazonian groups comprising 1.2 million people in Perú, Bolivia, Ecuador, Brazil and Colombia, the Coordinadora de las Organizaciones Indígenas de la Cuenca Amazónica (COICA) held a meeting in Iquitos, Perú, to discuss the relationship between indigenous peoples and the environment. This meeting resulted in a document, "Two Agendas on Amazon Development," which was published in the journal *Cultural Survival Quarterly* (COICA 1989) and contained two parts—the first entitled "For Bilateral and Multilateral Funders" and the second "To the Community of Concerned Environmentalists." We have reproduced the second part below, because even though it was published in *Cultural Survival Quarterly*, it has not been read by many of the people to whom it was directed. Following the statement, we provide a commentary on the difficulties and challenges that inevitably will be raised by this statement.

### **The Coordinadora de las Organizaciones Indígenas de la Cuenca Amazónica Declaration**

We, the Indigenous Peoples, have been an integral part of the Amazonian Biosphere for millennia. We use and care for the resources of that biosphere with respect,

*conservación en forma distinta, con las poblaciones indígenas enfatizando la preservación de las características generales del hábitat y la exclusión de la alteración extensa del hábitat. Nosotros concluimos que el interés de los biólogos conservacionistas puede no ser totalmente compatible con los intereses de los grupos indígenas y sus defensores, pero a través de la cooperación ambos lados están ganando un tiempo valioso.*

because it is our home, and because we know that our survival and that of our future generations depend on it. Our accumulated knowledge about the ecology of our forest home, our models for living within the Amazonian Biosphere, our reverence and respect for the tropical forest and its other inhabitants, both plant and animal, are the keys to guaranteeing the future of the Amazon Basin. A guarantee not only for our peoples, but also for all of humanity. Our experience, especially during the past 100 years, has taught us that when politicians and developers take charge of our Amazon, they are capable of destroying it because of their short-sightedness, their ignorance and their greed.

We are pleased and encouraged to see the interest and concern expressed by the environmentalist community for the future of our homeland. We are gratified by the efforts you have made in your country to educate your peoples about our homeland and the threat it now faces as well as the efforts you have made in South America to defend the Amazonian rain forests and to encourage proper management of their resources. We greatly appreciate and fully support the efforts some of you are making to lobby the U.S. Congress, the World Bank, USAID [U.S. Agency for International Development], and the InterAmerican Development Bank on behalf of the Amazonian Biosphere and its inhabitants. We recognize that through these efforts, the community of environmentalists has become an important political actor in determining the future of the Amazon Basin.

We are keenly aware that you share with us a common perception of the dangers which face our homeland. While we may differ about the methods to be used, we do share a fundamental concern for encouraging the long-term conservation and the intelligent use of the Amazonian rain forest. We have the same conservation goals.

Our concerns: We are concerned that you have left us, the Indigenous Peoples, out of your vision of the Amazonian Biosphere. The focus of concern of the environmental community has typically been the preservation of the tropical forests and its plant and animal inhabitants. You have shown little interest in its human inhabitants who are also part of that biosphere.

We are concerned about the "Debt for Nature Swaps" which put your organizations in a position of negotiating with our governments for the future of our homelands. We know of specific examples of such swaps which have shown the most brazen disregard for the rights of the indigenous inhabitants and which are resulting in the ultimate destruction of the very forests which they were meant to preserve.

We are concerned that you have left us Indigenous Peoples and our organizations out of the political process which is determining the future of our homeland. While we appreciate your efforts on our behalf, we want to make it clear that we never delegated any power of representation to the environmentalist community nor to any individual or organization within that community.

We are concerned about the violence and ecological destruction of our homeland caused by the increasing production and trafficking of cocaine, most of which is consumed here in the United States.

**What We Want:** We want you, the environmental community, to recognize that the most effective defense of the Amazonian biosphere is the recognition of our ownership rights over our territories and the promotion of our models for living within that biosphere.

We want you, the environmental community, to recognize that we Indigenous Peoples are an important and integral part of the Amazonian Biosphere.

We want you, the environmental community, to recognize and promote our rights as Indigenous Peoples as we have been defining those rights within the UN [United Nations] Working Group for Indigenous Peoples.

We want to represent ourselves and our interests directly in all negotiations concerning the future of our Amazonian homeland.

**What We Propose:** We propose that you work directly with our organizations on all your programs and campaigns which affect our homelands.

We propose that you swap "debt for indigenous stewardship" which would allow your organizations to help return areas of the Amazonian rain forest to our care and control.

We propose establishing a permanent dialogue with you to develop and implement new models for using the rain forest based on the list of alternatives presented with this document.

We propose joining hands with those members of the worldwide environmentalist community who:

- recognize our historical role as caretakers of the Amazon Basin.
- support our efforts to reclaim and defend our traditional territories.
- accept our organizations as legitimate and equal partners.

We propose reaching out to other Amazonian peoples such as the rubber tappers, the Brazil-nut gatherers, and others whose livelihood depends on the non-destructive extractive activities, many of [which] are of indigenous origin.

We propose that you consider allying yourselves with us, the Indigenous Peoples of the Amazon, in defense of our Amazonian homeland. (COICA 1989:77-78)

### Indigenous Peoples as Natural Conservationists

It is important to note that the reasoning found in COICA's statement is not confined to that organization; rather it reflects a widespread belief that support for indigenous peoples is equivalent to, and even a prerequisite for, conservation of nature (Fig. 1). This is clearly revealed in a statement from a September 1989 meeting in New England that brought together indigenous representatives from around the world: "The message of the conference is that there is no option . . . that tribal land rights and sovereignty must be supported in order to save both indigenous peoples *and the world's remaining natural areas*." (van Lennep 1990:46; our emphasis) The statement continues "As indigenous peoples, we have always lived in accordance with the

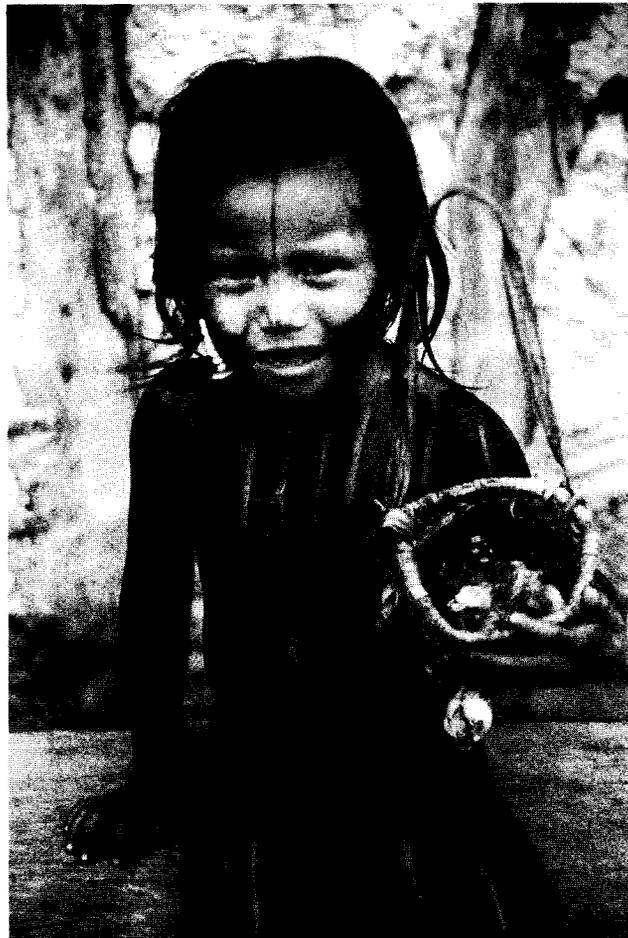


Figure 1. Kayapó child with basket of hatchling parrots. Gorotire, Pará, Brazil. Photograph by Kent H. Redford.

sacred and natural laws, in balance with the natural world. . . . As indigenous peoples, we stand on the front lines of the struggle to defend the natural world. . . . We delegates to this conference recognize that indigenous people harvest resources in a sustainable manner. . . ." (page 47).

These powerful statements are challenges to conservation biologists and environmentalists to involve indigenous peoples in all efforts to save not only the Amazon but all natural areas inhabited by native residents. The challenge is compelling, as witnessed by the fact that at the Iquitos meeting a statement entitled "First Summit between Indigenous Peoples and Environmentalists Iquitos Declaration," which contained, *inter alia*, an abbreviated version of the agenda printed above, was signed by over 20 representatives of indigenous groups and representatives of the Bank Information Center, Conservation International, Friends of the Earth U.S.A., Greenpeace, the National Wildlife Federation, the Rainforest Action Network, The Rainforest Alliance, the Sierra Club Legal Defense Fund, the World Resources In-

stitute, the World Wildlife Fund, and Fundación Peruana para la Conservación de la Naturaleza (COICA n.d.).

But the world has moved well beyond simply signing statements concerning the compatibility of indigenous rights and biological conservation. In a dramatic move, Colombia has assigned land rights to 49,000 square miles of rain forest (half of its rain forest) to the local indigenous inhabitants, with the express reasoning that they are the people most likely to protect the biological diversity of the forest (Economist 1989). In 1992, in a similar action, the Brazilian government demarcated a 36,000-square-mile area for the Yanomami; as one journalist put it, "And because the nomadic Yanomami are de facto protectors of their habitat, the decision should also help conserve the Amazon rain forest" (Michaels 1991).

The question we wish to raise is whether the agendas of the indigenous peoples and their advocates are in fact as concordant with the interests of those primarily concerned with biological conservation as has been suggested. The statements quoted above, and many others (see Gray 1991) repeatedly claim this to be the case, but much evidence indicates that often the aims of these two groups are partially or completely in conflict. Our concern is that by failing to move beyond simple rhetoric, often for political expediency, conservationists and indigenous peoples alike will reap the whirlwind of often widely divergent expectations.

### **Indigenous Peoples, Conservation, and the Modern World**

Let us begin by assessing what we believe to be the expectations of indigenous peoples in the Amazon. At present, native peoples are in a life and death struggle to hold onto the lands they have inhabited for hundreds if not thousands of years. In spite of a growing awareness of their plight among concerned members of the world community, indigenous peoples continue to be victimized at the hands of national governments. If some indigenous peoples have presented themselves uncritically as "natural conservationists," it is only because they recognize the power of this concept in rallying support for their struggle for land rights, particularly from important international conservation organizations such as those listed earlier. In the current world climate, the conservation community has significantly more resources, and hence political influence, than the indigenous movement does. Attempts by indigenous rights organizations to meld agendas with conservationists is an astute and understandable response.

Nonetheless, this well-meaning but perhaps overzealous attempt by numerous individuals and interest groups to generalize indigenous peoples as natural conservationists places a dangerous burden on many Native

Americans (Redford 1991). Indigenous peoples are not a monolithic entity (Stearman 1992). Many, but not all, are acutely aware of their close cultural ties to the tropical forest and the necessity of conserving this resource for their continued well-being. For example, the Coconucos and Yanaconas of Colombia hold strong religious views about the preservation of an area that includes the Purace National Park. According to their belief system, this park is the dominion of the spirit being, Jucas, who is the source of all natural resources necessary for life. The Coconucos and Yanaconas work both formally and informally to protect the park, as park guards and by providing general oversight to the area (Faust 1991).

Other indigenous groups may not show such awareness or concern for the natural environment. Small groups in particular seem especially vulnerable to internal as well as external pressures to exploit their resources in ways that may not promote conservation (Stearman 1990). In most cases, these numerous small groups of indigenous peoples are but remnants of once thriving communities. Their population decline can usually be attributed to disease, genocide, and the brutalities suffered during the rubber boom of the early Twentieth Century, when entire regions of people were enslaved, tortured, and murdered (Tausig 1987). The small groups that survive are the descendents of those who escaped by retreating farther into the forest, out of harm's way. Today, as they face the conflicting demands and expectations of outsiders such as settlers, traders, miners, loggers, missionaries, government officials, and development agents, these small ethnic groups frequently find it virtually impossible to hold onto traditional cultural values, including those that may have supported a conservation ethic.

Even within a large, politically sophisticated native group with a great deal of cultural integrity and concern for preserving their natural environment, forces are at work that may run counter to conservation interests, and differences often exist between competing elements within the same ethnic group. Perhaps one of the most frequently cited cases of indigenous peoples successfully managing and conserving large, relatively undisturbed areas of their territory is that of the Kuna of Panama. Even though the Kuna do not live in the Amazon Basin, their case is often used as a model for other neotropical forest areas. Recent events indicate that the status quo among the Kuna may not be maintained. According to Mac Chapin (1991), an anthropologist who has lengthy experience with the Kuna, younger Kuna are beginning to question many of the old beliefs that inform the Kuna conservation ethic, or are simply failing to learn them. In the early 1980s, the Kuna were the first indigenous people in Latin America to set aside a large area of intact rain forest as a nature reserve. They received funding from several international sources for the study and management of this protected area. Like

the Coconucos and Yanaconas of Colombia, their concern for setting aside this area derives from their belief in "spirit sanctuaries." But young Kuna are receiving western education that does not teach the "way of the Great Father," and in fact teaches them that these beliefs are primitive superstitions and largely irrelevant. The result, according to Chapin, is that the world view of younger Kuna is subtly moving away from the old traditions. Chapin expresses the fear that, "if the traditional belief system disappears from their culture, will the Kuna continue to treat the Earth and all of its creatures with the same respect? If the Kuna take on board the new ecological ethic of the Western scientific tradition, will it be able to supplant the traditional beliefs and perform anything approaching and same function?" (Chapin 1991:44). Chapin's concerns are echoed by Alcorn (1991:324): "Changes in the culture of the world's younger generation do not bode well for the continuation of traditional conservation systems in areas where the transition out of subsistence economies is, and may continue to be, incomplete."

In the Amazon, the widely publicized Yanomamo case again demonstrates the differences that can occur within an indigenous group and among those who are its advocates when conservation issues are at stake. In both Brazil and Venezuela, Yanomamo have been granted large areas of rain forest after a long and vituperative struggle for land rights. In both countries, the conservation ethic of the Yanomamo has often been cited as another justification for granting them this territory: "... indigenous groups, with the detailed knowledge necessary for conservation, have carefully managed this environment for millenia." (Arvelo-Jimenez & Cousins 1992:10). Although well-intentioned, these advocates choose not to focus on the more complex indigenous valuation of natural resources on their rain forest territory and how these resources may best be used to meet their needs in a changing society. In the words of one Yanomamo: "... ecologists, missionaries, and the government continue to see us as forest-dwelling animals, without the right to decide anything, without the right to potable water, electricity, or television, without the right to exploit the mineral wealth of Yanomamo lands; mineral wealth that any civilized person would unhesitatingly exploit if it were in their backyard. . . . Indians no longer want to live as if they were captive in a large zoo to be photographed by tourists" (Yonomami 1990:94, translation ours).

We must remember that indigenous peoples are increasingly becoming members of the modern world. They want to be able to choose what they will keep and what they will discard of their traditional ways of life. Virtually all are now linked to the market economy through barter or actual cash exchange. Indigenous people commonly want and have a right to health care, education, and material conveniences that improve

their quality of life. While traditional knowledge of resource use may provide for these necessities in ways that conservationists find admirable and that perhaps serve as models for other peoples, the fact is that traditional ways often do not meet growing needs. Thus, indigenous peoples are forced to engage in activities that differ in type and intensity from traditional patterns of resource harvesting. As Hames (1991:192) has stated: "entrance into a market economy is undoubtedly the most potentially devastating change in aboriginal environmental relations."

To expect indigenous people to retain traditional, low-impact patterns of resource use is to deny them the right to grow and change in ways compatible with the rest of humanity. "Traditional culture-bearers should not be viewed as useful libraries of traditional information, but rather as essential participants in biodiversity conservation *during the transition to a fully integrated global capitalist economy* (Alcorn 1991:323; our emphasis)."

### Biological Diversity and the Conservation Biologist

Even in those cases where indigenous peoples overtly profess a concern for conserving biological diversity for political, economic, religious, aesthetic, or moral reasons, they almost certainly do not ascribe the same meaning to this term as do biologists. The biodiversity that conservationists are interested in conserving is defined in a variety of ways but usually includes the full set of species, genetic variation within these species, the variety of ecosystems that contain the species, and the natural abundance in which these items occur (Office of Technology Assessment 1987). To conservationists, a forested landscape in which all biodiversity is conserved should include healthy populations of jaguars, woolly monkeys, white-lipped peccaries, large curassow, Scarlet Macaws, mahogany trees, tropical cedar trees, Brazil nuts, and large fruit-eating fish. It should be an area in which gene frequencies, species, landscapes or process—be they ecological or evolutionary—are allowed to follow a course largely unaffected by human activity.

Although there has been much discussion suggesting that low-level economic activity would be compatible with such biodiversity conservation, it is clear that if the *full range* of genetic, species, and ecosystem diversity is to be maintained *in its natural abundance* on a given piece of land, then virtually any significant activity by humans must not be allowed (see Redford 1992). Many studies have illustrated the point that even low levels of indigenous activity alter biodiversity as defined above (Fig. 2). For example, Vickers (1991) showed that although the Siona-Secoya of the Ecuadorian Amazon were able to hunt most species of game animals at con-



Figure 2. Yuquí hunter plucking macaw (*Ara*). Chimore, Bolivia. Photograph by Kent H. Redford.

stant levels over a 10-year period, populations of woolly monkeys (*Lagothrix lagothricha*), curassow (*Mitu salivini*), and the trumpeter (*Psophia crepitans*) had been severely depleted. It should be stressed here that the vast majority of plant and animal species in the areas used by the Siona-Secoya appear not to have been strongly negatively affected by this group's activities—but not all species were unaffected.

Though not very well understood by ecologists, indications are that the loss of certain species (such as keystone species) will result in major changes in the community or ecosystem (see Terborgh 1988 and review in Redford 1992). It is possible that the loss of seed-dispersal services performed by those three large, frugivorous species negatively affected by Siona-Secoya hunting will change the interaction between large and small-seeded tree species, and will ultimately result in a different forest than the one in which these species were present.

Increasing evidence indicates that there is virtually no area in the Amazon that has not been affected in one way or another by human activity during the last several

millenia (Balée 1989; Roosevelt 1989). In this light, there may be no such thing as "virgin forest." Even so, anthropogenic effects to a large extent were limited in scale and intensity. Following World War II, however, factors such as rapid acculturation, increased market participation, and large-scale development projects have inexorably changed the relationship between indigenous people and the Amazon forest. People who once made their own decisions about how to exploit their natural resources are now experiencing intense external pressures to conform to and participate in a consumer economy. What used to be local effects have become regional and even global effects, and humans now possess the capability to destroy much of what remains of the Amazon forest.

### Biological Diversity and the Native Amazonian

In our experience, when indigenous peoples refer to biodiversity, they use a definition substantially different than the one used by conservation biologists. In the indigenous view, preserving biodiversity means preventing large-scale destruction, such as cutting and burning of forest for cattle ranches; building dams that displace native inhabitants from their homelands or alter the landscape in ways that make traditional subsistence from local resources impossible; or oil exploration and gold mining that bring in throngs of outsiders that disrupt indigenous life ways, introduce disease, and generally wreak havoc on the environment. Indigenous peoples rely on high levels of certain types of biodiversity. Their food security and social reproduction typically depend on high levels of intraspecific diversity (such as in manioc), high species diversity (for gathered foods), and ecological processes (pollination, succession) (Alcorn 1989).

To indigenous peoples, conserving biodiversity may not preclude slash-and-burn farming for the market, small-scale cattle ranching, selective logging from which they gain a profit, subsistence or even commercial hunting, or other forms of extractive activities that leave large areas of the forest or other natural habitat altered but still standing. This is clear from the call by the Amazonian natives' organizations for solidarity between indigenous communities and groups such as rubber tappers. But it must be recognized that, like indigenous reserves, extractive reserves are being created largely in response to issues involving social equity and land rights (Allegretti 1990). While extractive reserves do conserve important elements of biodiversity, the activities of rubber tappers have clearly been shown to alter forest biodiversity (see Almeida 1992).

Although multiple use areas such as biosphere reserves are characterized as meeting conservation as well as indigenous needs, neither group may fulfill its expect-

tations in the end, creating conflict and causing inevitable recriminations. If indigenous peoples are ceded land, then it is unjust and unrealistic to expect them to conform to some preconceived stereotype of the "ecologically noble savage." And it is certainly reprehensible simply to create conservation areas and then to inform the indigenous inhabitants that they are now going to be "managed" as part of that unit. In those settings where the same piece of land is targeted to satisfy the agendas of both environmentalists and indigenous peoples, both groups must explicitly address questions of trade-offs.

While conservationists may hold the unrealistic expectation that native Amazonians will preserve land ceded to them in the same state in which they received it, indigenous peoples expect to be able to use those lands to assure their physical and cultural survival. Some indigenous groups may meet the expectations of conservationists, at least for the near future, by maintaining traditional ways of life that conserve "acceptable" levels of biodiversity in their territories. Others will not. In either case, indigenous peoples have the right to determine their own future.

At the same time, conservationists cannot demand that, in order to retain their land, native peoples must remain in isolated, stagnant communities using only limited forms of technology to exploit the environment in ways dictated by outsiders. As is often the case, unfortunately, this strategy denies the dynamic nature of culture and leads only to societies that inevitably suffer marginalization, poverty, and the destruction of those very traditions and values that were naively thought to be preserved by attempts to stop the forces of change. Rather, conservationists should work with native peoples as equal partners in developing alternative strategies to forest destruction, listening to their needs, and learning from indigenous experience. Native Amazonians know the forest better than anyone else. And while they may not be natural conservationists one and all, many respect the need to conserve the forest and the resources it holds, if for no other reason than to insure their own cultural survival. If indigenous people lose their land, they also risk losing their collective identity.

Much of this collective identity is imbedded in holding land communally, which gives indigenous patterns of land use much greater promise for conservation than western systems of individual property rights. Nonetheless, notwithstanding recent efforts, most Latin American nations with agrarian reform laws have difficulty dealing with the concepts of both communal land ownership and the granting of large tracts of land for purposes other than intensive agriculture. The philosophy, often codified in law, that the forest must be destroyed to qualify land as being used legitimately must be changed. As Gray (1991:18) states, "A people cannot live as a people unless they control their resources, their future, and their own development." And biologists

must be prepared to recognize that an indigenous group has the right to decide the direction of its future, even if that future holds no place for the biodiversity conservationists so highly value.

Still, supporting indigenous land rights continues to offer the best hope for conserving and rationally using those tropical forests not contained in national parks. The communal territories of indigenous peoples maintain relatively intact large areas of land, buying time for the development of new ideas and for the creation of greater support for both biological conservation and the preservation of traditional cultural values. While the alliances forged between conservation groups and native Amazonians may be based on widely divergent agendas, they are not immutable. Through frank discussion and debate, the explicit recognition of different priorities and consequent trade-offs, and the understanding and compromise that this process engenders, indigenous peoples and conservation biologists can both work toward reaching the goals of common good that both are seeking.

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