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Indigenous Views of Land and the Environment

Shelton H. Davis, editor

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FOREWORD

The following report, which was written as a background paper for the World Development Report 1992 on Development and the Environment, has particular relevance to the World Bank and its Borrower Countries. The World Bank was the first multilateral agency to issue a special policy for the treatment of indigenous peoples in internationally-funded development projects. This policy stated that the "Bank will not assist development projects that knowingly involve encroachment on traditional territories being used or occupied by tribal people, unless adequate safeguards are provided." Such safeguards included the demarcation and protection of indigenous lands, and the providing of culturally appropriate social services, especially to protect and maintain indigenous people's health.

Based on the experience of the previous decade, in September 1991 the World Bank issued a revised policy which extended the definition of indigenous peoples to reflect the much broader diversity of social and legal definitions and situations found in its member countries. The new policy maintains the protective measures of the earlier policy, but also stresses the need to promote the informed participation of indigenous peoples and their sharing in the social and economic benefits of the development process. One way in which this done is through the preparation and financing of special Indigenous Development Plans.

Indigenous peoples can make a major contribution to the appropriate design and successful implementation of Bank-funded natural resource management and biodiversity conservation projects. Indigenous peoples, especially when they have not been displaced from their ancestral homelands, possess quite sophisticated environmental knowledge and are frequently excellent resource managers. This indigenous knowledge and experience has now been recognized by numerous conservation organizations and is included in such important programmatic documents as the World Conservation Strategy, the Agenda 21 report of the UN Conference on Environment and Development, and the International Biodiversity Convention.

To incorporate indigenous peoples into the global effort to protect fragile environments and conserve biodiversity, much more attention will have to be given to these people's values, perspectives and world views. The report prepared by Shelton Davis and his colleagues provides a valuable introduction to the environmental values and perceptions of a small number of indigenous peoples living in geographically dispersed parts of the world. These perspectives, as the report shows, have great significance both for national policies toward indigenous peoples and for internationally-funded development projects.



Andrew Steer
Deputy Director
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Series Note:

World Development Report Background Papers

The World Development Report 1992, "Development and the Environment," discusses the possible effects of the expected dramatic growth in the world's population, industrial output, use of energy, and demand for food. Under current practices, the result could be appalling environmental conditions in both urban and rural areas. The World Development Report presents an alternative, albeit more difficult, path - one that, if taken, would allow future generations to witness improved environmental conditions accompanied by rapid economic development and the virtual eradication of widespread poverty. Choosing this path will require that both industrial and developing countries seize the current moment of opportunity to reform policies, institutions, and aid programs. A two-fold strategy is required.

- First, take advantage of the positive links between economic efficiency, income growth, and protection of the environment. This calls for accelerating programs for reducing poverty, removing distortions that encourage the economically inefficient and environmentally damaging use of natural resources, clarifying property rights, expanding programs for education (especially for girls), family planning services, sanitation and clean water, and agricultural extension, credit and research.

- Second, break the negative links between economic activity and the environment. Certain targeted measures, described in the Report, can bring dramatic improvements in environmental quality at modest cost in investment and economic efficiency. To implement them will require overcoming the power of vested interests, building strong institutions, improving knowledge, encouraging participatory decisionmaking, and building a partnership of cooperation between industrial and developing countries.

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Executive Summary

The past decade has witnessed a growing interest on the part of scientists and land-use planners in the practical role which indigenous peoples can play in the conservation of fragile ecosystems, such as rainforests, arid- and semi-arid lands and mountainous environments. Rather than being obstacles to societal progress, the world's remaining indigenous peoples -- who are estimated to number over 250 million people and live in more than 70 countries -- are believed to possess sophisticated environmental knowledge which may provide the key to the successful management and development of these regions. This growing awareness has led a number of international bodies, such as the World Commission on Environment and Development and the International Union for the Conservation of Nature and Natural Resources, to call for the more active incorporation of indigenous peoples and their traditional knowledge in regional and national developmental and environmental planning.

In preparation for the 1992 World Development Report, a Bank sociologist asked a number of individuals affiliated with non-governmental organizations who work with indigenous peoples to provide brief reports on indigenous peoples' views of land and the environment. Specifically, reports were sought which described the environmental situation of three different indigenous groups: the Quichua-speaking Indians in the rainforests of eastern Ecuador; the Maasai and Samburu nomadic pastoralists of Kenya; and, the indigenous swidden farmers of the upland areas of the Philippines.

Each report responds to three questions:

- (1) What are the traditional views held by indigenous peoples about land and the environment?
- (2) How have national laws and government policies either corresponded to or conflicted with these views?
- (3) What types of policies, programs or projects could more adequately take indigenous views of land and the environment into account?

Although this survey was not meant to be systematic or exhaustive, it does provide some insights which are relevant to the Bank, its Borrowers and the general development-assistance community.

First, indigenous peoples -- in contrast to Western economists and development planners -- do not view land as a "commodity" which can be bought and sold in impersonal markets, nor do they view the trees, plants, animals and fish which cohabit the land as "natural resources" which produce profits or rents. To the contrary, the indigenous view -- which was probably

shared by our ancestors prior to the rise of the modern industrial market economy -- is that land is a substance endowed with sacred meanings, embedded in social relations and fundamental to the definition of a people's existence and identity. Similarly, the trees, plants, animals and fish which inhabit the land are highly personal beings (many times a "kinship" idiom is used to describe these beings) which form part of their social and spiritual universes. This close attachment to the land and the environment is the defining characteristic of indigenous peoples; it is what links together, in a philosophical and cosmological sense, numerous geographically disparate and culturally diverse peoples throughout the world.

Second, there is a practical dimension to this indigenous outlook that is reflected in the traditional knowledge and strategies which indigenous peoples possess; these allow them to make a living in what from Western eyes appear to be fragile or harsh environments. The surviving Indian tribes of lowland South America, for example, have been found to understand the nature of forest succession, to replicate the ecological dynamics of the rainforest in their simple but highly diverse gardening economies, and to possess cultural practices which maintain a balance between human beings and limited animal and other protein resources. Similarly, the pastoral peoples of eastern Africa -- who for so long have been identified by Western livestock specialists as a major cause of arid and semi-arid land problems -- are today recognized as possessing sophisticated knowledge about range and animal management, including strategies for adapting to periodic drought and other natural calamities.

Third, the reports emphasize the well-documented fact that indigenous peoples throughout the world face serious problems in gaining official recognition of their customary land and territorial rights. In most countries inhabited by indigenous peoples, there is either very limited or no legal recognition of their land and territorial rights; when national laws do recognize such rights, they are seldom defended in practice, especially when they conflict with wider regional or national development goals.

The two reports on the Maasai and the Samburu, for instance, show the difficulties which pastoral peoples face in trying to adapt to national land and resource policies. At one time, the Kenyan government with Bank support called for the formation of "group ranches" as a way of decreasing rangeland pressures and increasing beef exports. More recently, the government has promoted the "privatization" of these entities, on the premise that group ranches and other forms of collective land tenure are an impediment to rational land use and management. Seldom questioned about their own wishes in terms of land tenure, local governance, education, health and a myriad of other matters, and surrounded by outsiders who covet their traditional lands and resources, the Maasai and Samburu -- like indigenous peoples in other parts of Africa and the world -- have tended either to retreat further into frontier hinterlands or to resist passively government attempts to change their modes of production and ways of life.

Fourth, all of the indigenous peoples surveyed in the reports face severe stresses in trying to maintain their traditional land use and natural resource management strategies. Some of these stresses come from demographic changes, resulting from the growth of their own populations

and the reduction of their traditional territories. But, there are also socio-cultural factors, such as the influences of missionaries, schooling, and the mass media on indigenous peoples; these factors must be taken into account in any realistic assessment of the potential of indigenous knowledge and practices for the conservation and management of fragile ecosystems.

Lastly, the authors of these reports highlight the desire of indigenous peoples to participate in the development and environmental programs planned for their lands. The nature of this participation, however, goes beyond the simple idea of "beneficiary participation" that was reflected in several of the integrated rural development programs of previous decades, and is now reflected in various contemporary conservation programs involving "buffer zones" around nature reserves. Indigenous peoples, such as those who find their expression in these reports, want to be the active designers of their own destinies. They wish to create alternative futures which would include the best of the traditional cultures and knowledge of their ancestors, along with the new techniques, knowledge and things offered by the modern world.

Indigenous peoples, through various organizations which have emerged in the international arena over the past decade, are striving to participate in the international debate over the environment and development. This report argues that it is in our own interests and those of the planet to open a permanent space for these peoples and their values in this debate. For, as one Native American person from the United States has so perceptibly said:

"Development is a conversation... a conversation which recognizes the traditional values, beliefs, and practices of the tribe... [and].. attributes value to things which the fields of economics and accounting have not yet learned to measure and count."

I. Introduction

For thousands of years prior to the rise of industrial society, human beings practiced modes of livelihood, used the land, and managed natural resources in ways different to our own. Today, large areas of the planet are still inhabited by the descendants of these ancient or traditional peoples. It is estimated that there are over 250 million indigenous peoples, comprising more than 4 percent of the world's population, and living in over 70 countries. What distinguishes indigenous peoples from other populations is their strong, collective attachment to their ancestral lands and the habitats where they live.

For most indigenous peoples, land is not viewed as a "commodity" which can be bought or sold in impersonal markets, but rather a substance endowed with sacred meanings which defines their existence and identity. Similarly, the trees, plants, animals, and fish, which inhabit the land are not "natural resources," but highly personal beings which form part of their social and spiritual universe. This close attachment to the land and environment (what some observers have described as a "stewardship of the earth") is the defining characteristic of indigenous peoples. Cosmologically and philosophically, it links together many geographically and culturally diverse peoples throughout the world (Burger, 1990).

Recently, there has been a growing interest among conservationists and land-use planners in the practical role which indigenous peoples and their traditional knowledge can play in the sustainable management and development of fragile ecosystems, such as rainforests, arid and semi-arid lands and mountainous environments. The World Commission on Environment Development in its 1987 report Our Common Future wrote:

These communities are the repositories of vast accumulations of traditional knowledge and experience that links humanity with its ancient origins. Their disappearance is a loss for the larger society, which could learn a great deal from their traditional skills in sustainably managing very complex ecological systems. It is a terrible irony that as formal development reaches more deeply into rain forests, deserts, and other isolated environments, it tends to destroy the only cultures that have proved able to thrive in these environments (World Commission on Environment and Development, 1987, pp. 114-115).

The International Union for the Conservation of Nature and Natural Resources (IUCN) has also emphasized the potential role of indigenous peoples in environmental planning and management. For several years, the IUCN has maintained a Task Force on Traditional Ecological Knowledge. At the meeting of its General Assembly in Perth, Australia in 1990, it requested that all of its documents--including the World Conservation Strategy and National Conservation Strategies--include specific recognition of the role of indigenous communities, and particularly indigenous women, in the management of environmental resources. It also called upon "aid agencies, all members of IUCN and other organizations to recognize the rights of these communities to participate in the formulation of policies and projects affecting their environment" (IUCN Resolution 18.16, "Recognition of the Role of Indigenous Communities", Perth, Australia, 1990).

these communities to participate in the formulation of policies and projects affecting their environment" (IUCN Resolution 18.16, "Recognition of the Role of Indigenous Communities", Perth, Australia, 1990).

While these statements reflect a new perspective on the role of indigenous peoples in conservation and development, they do not contain any analysis of the critical issues which indigenous peoples face in their respective national societies and in designing and participating in the economic development programs and projects taking place on their lands. In most countries inhabited by indigenous peoples, there is either very limited or no legal recognition of indigenous land and territorial rights; when national laws do recognize such rights, they are seldom defended in practice. Thus, in numerous well-documented cases, the land claims of indigenous peoples have been sacrificed for those of more powerful sectors of the national society, such as settlers, mining, and timber companies, and state hydroelectric and irrigation authorities. This lack of land recognition and protection has led to the uprooting and displacement of a large number of indigenous societies and, in some cases, to the total loss of their ancestral lands and cultural identities (Olson, 1990; Davis, 1977 and 1988).

Even in those countries where indigenous peoples have some degree of territorial recognition, there are stresses on their traditional land use and resource management systems. Population growth, for instance, frequently undermines the carrying capacity or sustainability of such systems. Demographic pressures are leading to fundamental changes in land-use strategies; the ecological viability of traditional swidden agricultural and pastoral systems is being questioned in many parts of the world (Klee, 1980; Talbot, 1986; Cruz and Cruz, 1990).

There are also strong acculturational pressures on indigenous peoples which are transforming their modes of livelihood, land use and resource management. These pressures include contacts with religious missions, schooling, market integration, the spread of mass communications and the electronic media and other urban influences. One of the results of such contact is inter-generational conflict between tribal elders, who possess and transmit traditional ecological knowledge, and younger, more educated indigenous persons, who are more disposed to accept modernizing influences in land and resource use as well as in other areas of culture (Chapin, 1991; Linden, 1991).

Finally, even where there are rural development or conservation programs directed at indigenous peoples, they tend to be designed by outsiders and they seldom promote the autonomy or self-reliance of the communities or peoples they are intended to benefit. Designing programs with rather than for indigenous peoples is one of the major challenges facing aid agencies interested in promoting indigenous peoples' participation in conservation and development programs (Smith, 1987; Beauclerk and Narby, 1988).

Fortunately, there is a growing awareness of these issues among indigenous peoples. They are organizing to make their voices heard regionally, nationally and in the international arena; in almost all countries where political conditions permit, including most recently in the

former republics of the Soviet Union, indigenous peoples have formed organizations to represent their viewpoints and to make sure that their positions on economic development and the environment are heard. In 1982, these indigenous organizations successfully convinced the UN Human Rights Commission to establish a special Working Group on Indigenous Populations, which is currently drafting a Declaration of Principles on the Rights of Indigenous Populations. More recently, they assisted in the revision of the ILO Convention 107 (now Convention 169), which is the only existing international instrument on the subject of indigenous and tribal peoples. Indigenous organizations have worked actively to ensure that their position is represented at the UN Conference on the Environment and Development in Brazil in 1992 (International Work Group for Indigenous Affairs, 1990 and 1991).

Indeed, the emerging "voice" of indigenous peoples generated the idea for this report. In preparation for the publication of the World Development Report 1992, we asked a small number of individuals affiliated with non-governmental organizations to provide us with brief reports on the views of indigenous peoples concerning land and the environment. Specifically, we sought reports on three different indigenous situations: a group of Indians in the rainforests of South America, nomadic pastoral groups in East Africa, and the hill or mountain peoples of the Philippines. For each situation, we asked the contracted individuals to write us a report which responded to three questions:

- (1) What are the traditional views held by these peoples about land and the environment?
- (2) How have national laws and government policies either corresponded to or conflicted with these views?
- (3) What types of policies, programs or projects could more adequately take indigenous views of land and the environment into account?

The results of this survey, which was not meant to be systematic but which does represent some very insightful case material, are the articles contained in this report.

The first article is by Theodore Macdonald, Jr., Dominique Irvine, and L. Esther Aranda of Cultural Survival, Inc. an indigenous rights organization staffed by anthropologists and located in Cambridge, Massachusetts. This article describes a forestry management project being designed and carried out by a Quichua-speaking Indian federation in eastern Ecuador. Like other indigenous groups of lowland South America, the Quichua have a very sophisticated knowledge of forest ecology and incorporate this knowledge into their mixed gardening, hunting and fishing economy. But over the past couple of decades their land-use practices have changed as a result of several factors: the opening up of their tribal territory to oil exploration and outside settlement; land demarcation and titling; and the availability of government credit for land clearance and cattle raising.

When a new road was constructed through their territory following the 1987 earthquake in Ecuador, the Quichua moved along the road in order to protect their lands from further encroachments by settlers. At the same time, there were pressures on the communities that established themselves along this road to open up their lands to commercial forestry exploitation. It was at this juncture that Cultural Survival was asked to assist the Quichua Indian federation in the establishment of an alternative forestry management project.

The project which the Cultural Survival anthropologists describe has some parallels with other natural forestry management projects being developed by indigenous organizations in Peru, Bolivia, and other Latin American countries (World Wildlife Fund, 1991). A major purpose of the project is to combine traditional indigenous resource management ideas with modern scientific forestry and agro-forestry practices. To do so, it is necessary to work closely with the indigenous federation, adapting the project's design and methodology to the larger goals of the indigenous organization and its affiliated communities. Much of the project work centers on diagnosing community problems with local indigenous promoters, conducting training courses, promoting exchanges with other indigenous groups, and designing forest management plans which indigenous communities can implement. While it is still too early to evaluate the social and ecological effects of this project, it and other small-scale indigenous forestry experiments may provide solutions to the problems of forest management in the humid tropics.

The second and third articles in the report deal with land use and environmental issues facing the Maasai and Samburu, two ethnically-related pastoral peoples who live in the East African nation of Kenya. Nomadic pastoralism, which is the mode of livelihood of millions of indigenous peoples in Africa, has been documented as a successful form of animal husbandry, especially in arid and semi-arid environments. By moving between wet and dry-season pastures, and by using customary social rules to define such movements, pastoral peoples maximize the chances of survival in a relatively harsh and uncertain environment. Most colonial and contemporary governments have neither understood nor respected the land-use practices of these peoples. The dominant policy has been to sedentarize them, thus transforming their land tenure systems and resource management and land-use strategies (Galaty, Aronson, Salzman, and Chouinard, 1981; Bennett, 1984).

Kenny Matampash and Gabriel Lochgan, the authors of the Maasai and Samburu articles, provide an "inside view" of how pastoral peoples perceive government land-use policies. Both authors are critical of attempts by the Kenyan government and international experts to introduce so-called "group ranches" among their peoples. The group ranch was a collective form of land tenure which was meant to stabilize pastoral peoples, improve range management and increase beef exports from the arid and semi-arid regions of the country. Many of the goals of the group ranch projects were never achieved, because of faulty assumptions, poor government administration and a lack of managerial training on the part of native pastoralists (Migot-Adholla and Little, 1981; Bekure and Ole Pasha, 1990).

These two articles on the Maasai and Samburu also take issue with other policies, such

as the privatization of group ranches, now being promoted by the Kenyan government. In contrast to these "top down" approaches to pastoral land tenure and development, they suggest a more participatory approach which takes into account the cultural traditions, knowledge and wishes of indigenous peoples. Interestingly, this participatory approach to land-use planning among pastoralists is now gaining legitimacy in international development circles, and is slowly becoming the basic policy framework in a number of arid and semi-arid countries on the African continent (Falloux and Mukendi, 1988; Barrow, 1991).

In his study of tribal Filipinos, anthropologist Ponciano L. Bennagen identifies the problems that upland swidden cultivators face in gaining recognition of their land rights and respect for their traditional land-use practices. Traditional swidden or slash-and-burn cultivation, which is practiced by indigenous peoples throughout Southeast Asia and the Pacific as well as in other parts of the world, has been shown to be ecologically sustainable under certain socio-cultural and demographic conditions. The term swidden comes from an Old English word for "burned clearing" and refers to the practice whereby farmers cut and burn the forest, then use the resultant ash to fertilize their cleared fields. Swidden cultivation, as practiced by indigenous peoples, is also associated with the inter-cropping of a large variety of cultigens and useful plants (many of them of medicinal value), and long fallow periods, which enable the nutrient poor tropical soils to rest. In the Central Cordillera region of northern Luzon in the Philippines, which is the homeland of more than 650,000 tribal people, upland swiddens are incorporated into a complex network of ancient terraces which serve to protect watersheds from soil erosion and sedimentation (Conklin, 1957; UNESCO, 1983; Lynch, 1990).

Bennagen's ethnographic survey points out that there are strong religious and cultural beliefs surrounding swidden cultivation and other aspects of land use among tribal Filipinos. Despite large-scale migration and social change in the upland regions, these cultural beliefs persist; they are evident, for instance, in the use of traditional land-based ideologies to mobilize indigenous groups against state-sponsored hydro-electric and geothermal projects. However, for these traditional cultural ideas and practices to play a role in upland resource management, the tribal peoples or "indigenous cultural communities" as they are now called, must obtain secure possession of their ancestral lands. A strong movement exists in the Philippines to recognize and legalize such ancestral possession and some attempt is being made, albeit not nearly widespread enough, to incorporate indigenous environmental knowledge into national land-use planning (Lynch and Talbot, 1988; World Bank, 1989).

Finally, we have appended to this report a statement by the Coordinating Body for the Indigenous People's Organizations of the Amazon Basin (COICA), which was presented to the World Bank and other international aid and lending institutions. COICA is an international body representing the interests of several regional and national indigenous organizations in the Amazon Basin of South America. Since 1987, it has been promoting a view of Amazonian development which takes into account the interests of the region's more than 1 million indigenous peoples. In 1989, it presented to the Bank and other institutions the attached document, which calls for a more formal process of consultation with indigenous peoples in the

design of national and regional development programs and a partnership among indigenous organizations, national governments and international donor agencies in seeking solutions to the region's problems. More recently, it has sponsored an "environmental summit" meeting with national and international conservation organizations in order to seek a common agenda for the preservation of the Amazon.

The COICA document reflects a growing interest on the part of indigenous peoples throughout the world not only in participating in local-level development and conservation projects, but also in having a voice in the wider global dialogue about environment and development policies. This attempt on the part of indigenous and other grassroots organizations to participate in the formulation of the "global environment and development agenda" marks a new era in international development and environmental planning. For what is being sought is a new notion of planetary governance in which indigenous and other local peoples participate, along with nation states, in the setting of international environment and development priorities.

Rebecca Adamson, the founder and director of the First Nations Financial Project in the United States, has written, "Development is a conversation ... a conversation which recognizes the traditional values, beliefs, and practices of the tribe ... a conversation which attributes value to things that the fields of economics and accounting have not yet learned to measure and count" (First Nations Development Institute, 1991, p. 18).

Indigenous peoples are striving, often against great odds, to participate in the international dialogue concerning the environment and development. Our capacity to open a space for these peoples and their traditional values in this dialogue may in the long run determine not only their survival, but the vitality of the planet and the welfare of us all.

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II. The Quichua of Eastern Ecuador

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A. Introduction

The lowland Quichua of eastern Ecuador, numbering an estimated 60,000 people, are the largest of the six Indian groups in the Ecuadorian Amazon. They occupy an extensive region that includes parts of the northern three provinces of the Ecuadorian Amazon and the adjoining Amazonian regions of Peru and Colombia. Their communities range from the montane rainforest of the foothills of the Andes at an altitude of more than 1000 meters to the tropical rainforests of the Amazonian lowlands at about 200 meters. Communities vary both in number of people and in their distribution. Until recently, most lowland Quichua lived widely dispersed in the forest in communities of from 10 to over 100 families. In response to recent pressures, many communities are now concentrating their houses around schools and near roads and market towns.

Although Quichua-speaking Indians recognize a common ethnic identity, both historical records and their own oral traditions provide evidence that the lowland Quichua have emerged as a distinct group only since the Conquest. Massive depopulation, the forced extraction of tribute payments to the King, and the formation of Catholic mission stations radically altered life for many indigenous people in the upper Amazon during the sixteenth century. Different Indian groups were forced to live together in common villages. Until 1750, historical chronicles recount that people living in the area still spoke distinct (now extinct) languages "among themselves" and used Quichua as a common tongue to communicate with Indians of other groups within the same village. The rich mix of historical traditions in different parts of present-day Quichua territory accounts for the diversity in dialect, myth, and customs among lowland Quichua groups, known variously in Ecuador today as Canelos Quichua, Quijos Quichua, and Napo Quichua, among other terms.

As in the past, most lowland Quichua obtain their subsistence from traditional swidden horticulture. However, they are now also linked closely to the national market economy throughout their territory. Individuals and households participate in income-generating activities such as teaching, wage labor, lumbering, or cash cropping.

These links, as well as other ties to the national society, have increased greatly since the 1960s. The Quichua now face unprecedented and rapidly evolving social and environmental changes. In response to these changes, the communities have reacted in a variety of ways. A few have retreated farther into the interior; their relations to their jungle habitat have remained largely unaltered. Most, however, have neither the space nor the desire to seek such refuge.

They have developed new land and resource use patterns, based partly on individual choice and partly on national pressures and policies. Recently, with the development and strengthening of Indian ethnic federations, some have begun to reclaim the right to determine their use of land and resources through programs of natural resource management. These programs suggest a means to combine aspects of their traditional society and economy with new technologies and the socio-political realities of the encroaching colonist frontier.

This paper reviews critical aspects of the Quichua's adaptive response to their changing physical and socio-political environment. The first section reviews long-held patterns of subsistence land use and the profound impact that indigenous people have had on the rainforest by managing forest succession. This section is followed by a review of the legislation and public policies that have drawn the Quichua away from a strict reliance on subsistence agriculture. The third section reviews one recent effort by a regional ethnic federation to secure land and resource rights for its member communities through a natural resource management program called Project PUMAREN. This project underlines the major concern of most indigenous organizations -- control over land and resources. As long as that control remains tenuous, concerns over land rights will take precedence over land use. Finally, the concluding section contains policy recommendations that would allow programs or projects to take the indigenous peoples' relations to their environment adequately into account.

B. Indigenous Forest Management

The idea of "virgin rainforest" is alien to lowland Quichua people, as it is to other Amazonian Indians, for they are aware of the ecological processes that constantly change the forest. The Quichua measure their own mark on the rainforest not only in fleeting memories of gardens cleared by ancestors, house sites long abandoned, and travels along well-worn paths. Their history is imprinted in the patchwork of habitats that surround their homes and that extends far into their distant hunting territories; they perceive their own role in the processes that shape the forest and the resources found in it.

Western researchers are beginning to document the fact that indigenous Amazonians have significantly shaped the forests in which they reside (eg, Posey and Balee, 1989; Irvine, 1987, 1989). Balee (1989), for example, argues that at least 12 percent -- and probably much more -- of the Amazon forest has been managed by indigenous people, and the mix of species found in these habitats today has been influenced by human activity.

Because lowland Quichua people recognize their place and role in forest ecosystems, conservation of rainforest resources is not predicated on preserving and protecting forests from human action. They understand that rainforests properly managed will maintain a diverse biota and complex structure. The majestic rainforests that impress Western scientists and inspire conservationists have often been used and managed by indigenous people over thousands of years. Understanding the role that indigenous forest managers have played in tropical rainforests forces us to change our view of these ecosystems and the possibilities of how they can be used.

The Traditional Land Use System

The ways that Amazonian Indian people use the forest are, as indigenous leaders have said, so "careful . . . that outsiders cannot perceive how we use it" (Chirif, et al 1990:181). Indeed Quichua forest management is often overlooked and unappreciated by outsiders who are unfamiliar with it, in part because the methods the Quichua use to alter the course of forest succession are technologically simple (consisting of axe and machete, and a vast array of knowledge), and also because the forest that regrows is diverse, complex, and hard to distinguish from undisturbed mature rainforest. The lowland Quichua achieve this effect by altering the mix of species that regrow in their agricultural clearings. Their decisions build on a profound knowledge of plant uses and population biology, and are based on individual and cultural preferences. The cumulative impact of management in these many small garden clearings is significant over the life of the forest, and results in a patchwork of habitats of different ages in different stages of succession, and with a varying blend of useful resources.

Management of forest regrowth begins even before crops are planted, when the forest is cleared. The Quichua clear gardens as small as one-third of a hectare and up to 2 or 3 hectares. They often leave useful seedlings and saplings, and occasionally larger trees from the forest, which they protect and allow to grow with their crops, principally manioc and plantains. Palms are frequently saved, because they are highly prized for diverse uses, and because they do not cast much shade and compete with crops.

In addition to protecting existing trees, the Quichua transplant seedlings of desirable forest species that are not found in the vicinity. As tree seedlings germinate and trees sprout from cut trunks in the newly cleared garden, people pick and choose by selectively weeding undesirable plants, and sparing useful trees. Finally, they plant seeds of a variety of cultivated tree crops, which are abundant in the Quichua crop repertoire and throughout the Amazon; these include the peach palm (Bactris gasipaes), which was domesticated in the upper Amazon and is the third most important food crop among the Quichua.

As the staple foods mature, the Quichua clear new plots adjacent to the old ones in order to maintain a constant harvest of tubers. The newly cleared area is known as the head ("uma") of the garden, and is extended in one direction into the forest while the original cleared area (the base or siqui) goes out of crop production and remains fallow. This directional extension of clearing continues until all suitable, flat, upland soil is cleared. Very little active management is needed once the area becomes fallow. Weeding around productive fruiting trees and eliminating vines when travelling through the area are the principal methods used. More important to the forest's long term composition is the radical change in the mix of trees established in the open garden gap.

The forest that results from these management practices is diverse and has a high concentration of useful species. Planted domesticated tree crops are abundant, but a wide diversity of rare and prized wild trees are also found. The managed fallow, called a "mauca"

or "purma" in Quichua (depending on the region), has a distinctive structure and composition easily recognizable to anyone familiar with the habitat. Over the space of 20 to 50 years, the tree crops and successional species die out, and the area soon closely resembles the mature forest found throughout the region. The intensity of forest management varies in Quichua territory. For example, gardens cultivated next to the house are carefully tended and nearly all the plants that are found there are useful for food, medicine, construction, or other household needs. Gardens farther from home may be less meticulously cared for, although they will still have a high proportion of trees with edible fruit, such as peach palm, or that are needed for house construction.

Quichua Concepts of the Natural World

Much of the Quichua's expressed "world view" draws its symbolism from the forest. The forest spirits are understood to control land and resources. The relationship between these "masters" of the environment and the Quichua is outlined here. However, a distinction exists between the Quichua's beliefs about the natural world and their actual adaptive response to change. What these Indians say about the natural world is not clearly linked to what they do in practice. Research that tests the possibility of such linkages can be a useful tool for working with indigenous populations in resource management programs.

For the Quichua, the masters of the natural world are spirits that exist in a parallel world. They are said to live within mountains, hills, and rivers. They not only control plants and animals but can also influence human relationships. Spirits can enter the human world and interact with people and other living creatures. Humans, on the other hand, perceive and interact with these spirits, unintentionally in dreams, or deliberately by using hallucinogenic plants. Aside from taking hallucinogens, they can also prepare themselves to enter the spirit world by abstaining from salt or hot pepper, and/or observing other taboos. In this way, the Quichua enter the spirit world to meet the spirits and learn from them.

Hallucinogens and taboos are understood as a means of maintaining a respectful relationship with the spirits. They are means whereby the Quichua prepare themselves to interact with spirits. While everyone can and does interact with spirits, shamans called yachajs (yachaj -- "one who knows") do so with greater frequency. Yachajs come to know certain spirits and build a strong relationship with them. The relationship is one of balance and reciprocity. By extension, the Quichua express a similarly balanced and reciprocal tie to the natural world. Such belief systems, variously transformed, are common throughout the Amazon and have been the source of considerable research. Outside observers -- anthropologists and ethnobotanists -- however, rarely link beliefs and actions. In this sense, Quichua actions are not necessarily coincident with their expressed beliefs. Much of this dissonance results from sudden and extensive contact with an expanding colonist frontier and the pressure of extractive industries.

C. The Changing World of the Quichuas

Quichua communities in the eastern Andes have had sporadic, but continuous contact with non-Indians since the arrival of the Spanish conquistadors in the 16th Century. It was not until the early 1960s, however, that the Quichua faced significant challenges from colonists. At that time, Quichua communities began to be outnumbered by colonists taking advantage of new roads which penetrated the region; planned and spontaneous colonization resulted from road-building or improvement. The population in Ecuadorian Amazon exploded. In 1962 there were 73,900 mostly indigenous inhabitants in the area. By 1974 there were 173,500 people, and by 1982 there were 263,800 -- an increase of more than 250 percent in only 20 years (Macdonald, 1983: 557; Hicks 1990). Colonization was most intense in the province of Napo where the population more than tripled from 25,582 in 1962 to 115,118 by 1982 (CONAIE, 1989: 40).

Colonists quickly learned that they could own their own piece of land under the Ley de Colonizacion de la Region Amazonica, which encouraged the settlement and productive use of the Amazon region for national development. Proclaimed as a complementary policy to the Ley de Reforma Agraria, the Ley de Colonizacion soon became the main drive for the distribution of land, implemented by the Instituto Ecuatoriano de Reforma Agraria y Colonizacion (IERAC). Between 1964 and 1973, agrarian reform had little effect on highland estates, while in the lowlands, IERAC awarded colonists 75 percent of the land under its jurisdiction (Macdonald, 1983: 556-557).

Indigenous communities differed in their reaction to the waves of settlers. Some, accepting the status of "non-proprietor", continued to occupy land to which they held no formal title; others preferred to move to more isolated areas. There were others still, however, who did not want to move or could not move because of population density. These latter communities responded through social mobilization in the form of ethnic federations.

The Rise of Ethnic Federations

Ethnic federations first appeared in Ecuador's southern Oriente during the early 1960s. In response to an influx of colonists into the relatively fertile Upano Valley, the Shuar Indians, aided by Salesian missionaries, linked dispersed households through a central settlement and local organization referred to as a centro. Subsequently, several centros joined together to form asociaciones and in 1964 the asociaciones united to form the Federación de Centros Shuar, or Shuar Federation. The Federation's main goal was to guarantee communal land rights for the centros. Public pronouncements challenged individual and regional development agencies' efforts to limit those rights, while other activities (such as a cattle credit program and bilingual-bicultural radio school system) either directly or indirectly strengthened the Federation's role (Salazar 1981, Federación de Centros Shuar, 1976, 1977).

The example of the Shuar Federation spurred the formation of Amazonian Indian federations in Napo province. The first of these, the Quichua Indian Federation of Indian

Organizations of the Napo (FOIN), was formed in 1973 and evolved out of the provincial federation of campesinos (FEPOCAN). Unlike the Shuar Federation, FOIN received neither economic nor institutional support from the areas's Catholic (Josefine) missionaries. On the contrary, both Catholic and Fundamental Protestant missionaries openly opposed the organization, as did the many local political authorities and merchants who dominated the strong patron-client ties characteristic of the area. Instead, the missionaries attempted to create and support alternative organizations with stronger links to their churches.

The Napo Indians' problems were complicated further by extensive oil exploitation, agribusiness, and colonization, which accelerated rapidly in the 1970s and continues to make Napo Province the Amazonian region's principal focus of production and growth. Until oil exploration and exploitation in Napo Province opened up over 600 kilometers of roads in the early 1970s, the province was one of the most isolated regions of the country. One of these roads ran along the oil pipeline directly from the capital in the land-scarce highlands to the middle Aguatico River. These roads gave easy access to colonists and workers.

Despite the availability of land to colonists, national agricultural output did not increase during the late 1960s. One reason was that in the 1960s little credit was available to small proprietors to improve their land or otherwise increase production. At the same time, large land owners did not want to invest in their holdings, since the Ley de Reforma Agraria threatened their land security. Finally, and perhaps most importantly, investors, both government and private, were focused almost entirely on urban development and service industries. Profits from oil production were invested in urban centers and services, not in agricultural production.

In 1974, the Ecuadorian government sought to stimulate the agricultural sector through a second set of agrarian laws. These laws stated that for purposes of legal title, a person's land holdings would be limited not by size, but by a requirement that at least 80 percent of the land be used "productively". Land not in some visible form of production was regarded as tierras baldias (unclaimed or unused lands) and could be redistributed by the IERAC.

Following the 1974 laws, the government, utilizing its new oil revenues, made credit available to encourage agricultural production. For those who held titles, especially small land owners, the most easily attained credit was for cattle ranching. Colonists and Indians responded to the "push" of agrarian reform laws and the "pull" of easy credit by becoming ranchers. Also, every colonist, and many Indians, without titles cleared forested areas to justify claims for title and then qualify for credit (Macdonald, 1983: 558-559).

Some of the Quichua reacted by dividing their communal holdings among individuals, who then were able to apply for formal titles. Many indigenous households cleared plots for pasture and, in so doing, shifted their economy from subsistence horticulture to one based mainly on cattle raising. This shift occurred in response to land tenure threats, to legislation, and to credit; it was not simply a straightforward decision to shift economies. During this period, such decisions were individual choices. Few Quichua communities had organized to the extent of the Shuar.

The difficulties of community organization were compounded by precarious land tenure. The national agrarian reform agency, IERAC, had been notoriously slow to provide title to Quichua Indian communities in Napo province. Meanwhile, as a network of roads linking newly-opened oil wells cut into the more isolated areas of eastern Napo, colonization from the Andean highlands increased competition for land throughout the region.

The Changing Political Scene

During the late 1970s and early 1980s, a progressive national political environment, promoted by Presidents Jaime Roldos and Oswaldo Hurtado aided the Indian organizations and communities of the Oriente both directly and indirectly. Although land titling continued to move slowly for the Quichuas, some of the smaller groups were able to obtain land titles from the government in greater numbers than in the past (Uquillas, 1985).

During this period the government created two agencies that provided assistance to Indian organizations and communities: the Office of Indian Affairs, and the Fund for Development of the Urban and Rural Marginal Populations (FODERUMA). The latter, a sector of the government's Central Bank, provided low interest loans and other forms of development assistance. Although both agencies worked with limited staff and budgets they nonetheless succeeded in assisting the emerging Indian organizations. FODERUMA provided economic assistance to communities and organizations. The Office of Indian Affairs worked closely with the organizations and helped many of them obtain essential, corporate status. During this period relations with the government were relatively cordial; the Indian organizations regarded both agencies as service organizations that supported and strengthened the federations. Previously aided almost exclusively by international NGO support agencies, they began to work more closely with government institutions. This not only increased and expanded their sources of support, but drew them more closely into the national political arena and increased their visibility and status within the country.

Newly enacted conservation legislation also supported Indian interests. In 1981 the Ecuadorian congress passed a set of forestry laws (Ley Forestal y de Conservacion de Areas Naturales y Vida Silvestre). This legislation established forest management as a national priority and encouraged the development of forestry programs, especially among small farmers. More important, lands deemed to be protective forests or in permanent use for their forest resources, as well as those with established plans for reforestation, would be exempt from the laws of agrarian reform. Previously, agrarian reform laws stated that land not under visible use could be expropriated. The new forestry legislation allowed land owners to shift away from ecologically and economically unsound activities such as cattle raising and institute rational resource management programs such as agroforestry and forest management (Macdonald, 1983).

In brief, by 1982 independent Indian federations had become part of the local and national political landscape, had increased their power and support base by working directly with government agencies, and were enabled by new legislation to adopt ecologically sound, forest

management.

Setbacks for the Indigenous Federations

The Quichuas situation changed dramatically in 1983 with the installation of a conservative administration, headed by President Leon Febres Cordero, which advocated unrestrained economic activities by the private sector, supported colonization in the Amazon and opposed popular organizations and agrarian reform. There were also strong attacks against labor unions, public demonstrations, and the opposition political parties.

The Indian organizations suffered major setbacks during this period. In May 1985, the Office of Indian Affairs was elevated to the status of a directorate (Dirección Nacional de Poblaciones Indígenas del Ecuador) and was officially declared as the "the technical-operational agency in charge of defining and applying policy and executing programs and projects for the organization and integrated development of the indigenous populations of Ecuador" (Amanecer Indio, 1985a:6). Armed with such a broad mandate, the national directorate legally assumed all of the roles that the ethnic federations had been working to establish for themselves.

To further diminish the status of the independent ethnic federations, new organizations, often made up of only a handful of self-defined leaders supportive of the government, suddenly appeared in many areas and, with the assistance and support of the new directorate, were quickly given juridical recognition. The directorate also began to work closely with FODERUMA, which provided project funds to the newly formed organizations or directly to communities, thus weakening federation-community ties. Seen as an effort to establish government hegemony over Indian communities, and weaken the power of the federations, the directorate's actions sparked strong public rejection from the older, independent Indian organizations (Amanecer Indio, 1985b). At the same time IERAC halted all communal land titling; however, government-awarded concessions for African palm plantations increased and expanded rapidly, many of them onto Indian lands (Hoy 1985a, 1985b, 1985c; Kirk, 1986; Latin American Weekly Report, 1985; Ruiz, 1985). By 1985, the escalation of African palm plantations, and the tactics used to promote their growth, provoked another series of outcries from the regional and national Indian organizations (Amanecer Indio 1985b; CONFENIAE 1985a, 1985b).

In summary, since the mid-1960s Ecuador's Indians have organized many of their previously disparate communities into ethnic federations; these in turn had united into regional and national organizations. To an extent greater than in any other Latin American country, the Ecuadorian Indians' response to colonization and other external threats had led to the formation of a new national sector. But beginning in 1983 the independent Indian organizations, particularly those of the Oriente, were forced by government policies, or lack thereof, into a consistently defensive and occasionally aggressive posture, particularly with regard to such critical issues as land rights and their role as representatives of Indian communities. Any activity proposed or promoted by the administration or its appointed officials was viewed with suspicion.

D. An Alternative Resource Management Program

By the 1980s, many Quichua had observed that cattle ranching was not a viable strategy for preserving their land. Yet, through the decade, credit was most easily obtained for cattle production and continued to draw Quichua into a cattle-based economy. However, following the earthquake of 1987, FOIN, began planning a resource management program as a strategy for defending and securing their communal land. The organization did so by taking advantage of the 1981 Ley Forestal de Conservacion de Areas Naturales y Vida Silvestre which, by placing forest management on a par with cattle raising as an "acceptable" form of land use (i.e. exempting owners from the laws of IERAC) gave indigenous people new options for maintaining their land base.

In March 1988, FOIN initiated a broad, regional resource management program called PUMAREN (Program for the Use and Management of Natural Resources, initially called Project LETIMARIN). The goal of this program was to provide productive alternatives to Indian communities living along a recently completed road cut through mature rainforest. The strategy was to train an indigenous team that could design and implement a resource management program, in coordination with FOIN and the local communities. The timing and location of the program, however, resulted from an urgent need created after a national emergency heightened pressures on a number of FOIN's member communities.

A year earlier, in March 1987, a strong earthquake shook the Amazonian region of Ecuador. The powerful shocks swept away a portion of the only road that connected eastern Napo Province with the rest of the country, as well as the oil pipeline that transported Ecuador's principal source of revenues. The Ecuadorian government rapidly completed the remaining section of another more direct route, which had been under construction since 1983. The new road segment ran from the town of Loreto to the Hollin river and cut through tropical forest dotted with Quichua Indian communities. In response to the national emergency, the United States Agency for International Development supplied the bridges essential for the road's completion. But in compliance with social and environmental regulations mandated by the U.S. Congress, USAID conditioned its assistance on Ecuador's efforts to minimize social and environmental damage.

To meet these requirements, the international donor and the Ecuadorian government had to act quickly. Any road penetrating tropical forest usually funnels colonists and land speculators into previously isolated areas. In Napo province, only 9 of the approximately 30 Quichua communities along the new road held communal titles to their land; 4 others had completed the legal prerequisites for titling and were trying to obtain formal recognition. Thus, the lands of more than one half of the communities were at risk.

The Regional Timber Economy

In anticipation of colonists and land speculators, the area's scattered households had established residences along the path of the planned road. To demonstrate their presence, they cleared forest frontage and planted small patches of pasture. Previously, much of the felled timber would have been left to rot. But with the completion of the road, increased demand for hardwoods and pulp expanded the market for timber; consequently, what for many began as a small demonstration of possession, escalated to extensive logging. Individual purchasers and wood product companies spurred the work, buying up logs and sawn wood visible from the roadside, then seeking formal timbering concessions for additional cutting in the communities. In several areas, timber companies obtained permits from regional forest service officials of the National Forestry Directorate (DINAF) to log Indian community lands.

In several communities, logging produced internal disputes as companies, unsuccessful in their negotiations with the community as a whole, sought agreements with its individual members. Four communities agreed to negotiate contracts with companies in order to repay outstanding loans for cattle. They soon discovered that logging was environmentally destructive because of the heavy machinery used for extraction, and that they had no say in the planning and management of extraction. One of these four communities was so divided by the inequitable logging activities that they split into three smaller communities, none of which have yet achieved land title. Logging contracts, based on a fixed number of trees that the company could choose from any part of the community's lands, were focused principally on a single species of copal (Dacryodes copularis). This species of copal, a large and dominant tree restricted to the forests in the foothills of Mount Sumaco, was sold for prices as low as \$2-3 per tree.

Despite the fact that purchasers of logging rights had to pay DINAF a modest reforestation fee, no such reforestation took place. The easy economics of logging discouraged any investment in reforestation by the loggers, while the modest size of the fee did not provide DINAF with funds sufficient to undertake any significant reforestation themselves. Thus, in many cases, the Indian communities lost their trees and did not even receive the modest compensation of the reforestation "deposits" that were collected by DINAF. In brief, the Indians' initial efforts to demonstrate possession through modest land modification -- cleared land, stumps, and incipient pastures -- fed into an expanding regional timber economy and produced denuded roadside landscapes in a number of areas.

Land Rights and Resource Management

In addition to responding to the short-term problem of the low timber prices paid to its members, FOIN also recognized that extensive logging threatened their member communities' future resource base. FOIN saw that:

- Individuals were logging in the absence of any management plan or knowledge of appropriate forestry practices;

- Community members did not know the real value of their resources and lacked control over prices, which were set by middlemen;
- Lumber companies pressured communities to negotiate logging concessions, thus dividing the communities and increasing the risk of uncontrolled resource extraction;
- The technologies and methods employed in logging were not in line with the forest's ecology and the communities socio-cultural reality;
- There were no coordinating efforts between indigenous communities and national and regional agencies to design projects taking into account the communities' ecological and socio-cultural reality;
- People were not assessing the environmental damage they were causing;
- Indigenous communities were not participating in resource planning or exploitation processes;
- Non-indigenous communities who lived near FOIN member communities were encouraging non-sustainable exploitation of the forest through their agreements with lumber companies and activities as intermediaries (FOIN, 1991).

FOIN was the organization most effectively positioned to dissuade its members from their economically short-sighted decisions. But they could not simply tell people to give up an income-generating activity; they had to propose an alternative.

In March 1988, FOIN obtained funds to initiate a three-stage project that would eventually coordinate the design and implementation of a sustainable resource management program for the whole of the region affected by the road. Without disrupting or replacing subsistence agriculture, FOIN's 3-stage program was designed to:

- clarify and resolve land tenure disputes along the road and in its area of influence;
- introduce new technologies for natural forest management and agroforestry that would foster resource conservation;
- implement those technologies that, in the opinion of the communities and the organizations, would provide them with sources of immediate income as well as a long-term resource base to generate income on an ongoing basis.

Phase I: Securing Land Tenure

Phase I addressed the issue of land tenure. FOIN established a "technical staff" consisting of nine extension workers and a coordinator, all Quichua-speaking Indian high school graduates to assess the land tenure status of affected communities.

Over a four-month period, these workers visited and surveyed all 43 FOIN member communities along or near the road. Based on the data gathered in these efforts, the team developed a series of recommendations for DINAF and IERAC which were detailed in a final report presented to the government. Although the quality of the report surprised and impressed government officials, to date neither agency has moved toward formal recognition of the untitled indigenous communities near the road.

Phase II: Training in Resource-Management Technologies

Since early 1989, the program has moved into its second phase, which focuses on training in resource management technologies. Training highlights Indian-to-Indian exchanges as a methodology, and includes the following activities:

- Training by Kuna Indians of Panama's Project PEMASKY. The training ranges from general resource management concepts to specific techniques for planning and implementing such work. The Kuna have primarily focused their training on conservation and management of extremely fragile forest lands.
- Introduction to broad land-use-capacity studies and soil analysis, with technical assistance provided by staff from the Woods Hole Research Center.
- Introduction to basic silvicultural techniques, with technical assistance provided by Cultural Survival staff.
- Basic training in natural forest management from members of the Yanesha Forestry Cooperative (COFYAL) of Peru's Palcazu Valley.

This work contains three major elements:

1. Regional resource management planning and policy formation

This element focuses on continued environmental education in the communities and the progressive development of a regional resource management plan. Since September 1990, regular community visits have been undertaken by the members of Project PUMAREN, in coordination with FOIN's directorate. Team members prepared and circulated a draft document of a proposed regional plan; the decision to prepare their own document was made after reviewing two alternative studies, both of which lacked significant indigenous participation.

Since September 1990, PUMAREN has arranged regular meetings with community leaders to discuss their management plan. The meetings took place at FOIN headquarters in Tena with the participation of the communities along the Hollin-Loreto Road, those within its area of influence, and several of those along the Upper Napo River. The draft document has been discussed and revisions have been incorporated.

Although this work is time consuming, broad participation and discussion works to assure the acceptance of regional resource planning by a wide range of communities with varied, and often conflicting, opinions. Project PUMAREN staff will present the final draft document to FOIN for discussion and approval.

2. Natural forest management training

Training has consisted of initial exposure to forest management and extraction practices, to the strip shelter-belt silvicultural system, and to the administration of a forest industry during two visits by representatives of the Yanasha Forestry Cooperative (COFYAL) in the Pichis-Palcazu valley of Peru who assessed the feasibility of an indigenous forestry industry in the Sumaco area. Six weeks of on-site training for 6 members of PUMAREN at the COFYAL coop headquarters in Peru provided them with in-depth, hands on experience in the various aspects of a functioning forestry project.

Upon returning to Ecuador the team has begun to work on developing an indigenous forestry project with selected communities in the Sumaco area. Team members have visited communities to propose the project and identify interested participants. Their initial criteria, that the communities should be members of FOIN, that they should have sufficient forest resources to develop a management plan, and that they should have road access for extraction, limit the number of communities who could potentially participate. At least five communities have expressed serious interest at this early stage. It has been agreed that training from this point on will occur in the context of actual forestry planning and activities.

3. Institution building

Strengthening PUMAREN's organizational capacity has been a key issue. The team's coordination of the program and its work with communities are essential if the resource management program is to have the regional impact it was designed to produce. The team has received assistance with organizational planning to link it more effectively to the communities. In addition, a project advisor is working with PUMAREN to strengthen the group's organization and coordinate short-term technical assistance.

Phase III: Implementation of a Natural Resource Management Project

The work in this third phase will focus on the implementation of a natural forest management project in at least those three communities where suitable organization and forest

resources are known to exist. The indigenous project will focus on developing a forest industry that will supply both local and international markets with a diversity of tree species extracted from restricted zones under a management plan.

Two Yanesha experts in forest management and extraction techniques, as well as a US-based forester who has worked for several years with COFYAL and other tropical forestry projects, have assisted in evaluating the feasibility of a forestry project in the three communities. Following a favorable initial study, PUMAREN and community members are now being trained to elaborate a forest management plan consisting of the delimitation of a forest reserve on communal land, an inventory of the forest resources in the reserve, and the development of a strategy for extracting, processing, and marketing the wood. These forest management plans are being developed through ongoing work by PUMAREN and community management committees, and by regular training workshops. A major focus of these workshops is on methods to incorporate local forest uses and knowledge of forest resources into the management plans.

At present, Project PUMAREN is in a position to demonstrate to the Quichua and other indigenous people that they do not need to adopt alien and environmentally unsound production practices as a means of securing their land base. They are working towards an indigenous forestry program that combines their traditional knowledge with new agroforestry technologies. Yet, that link between traditional and new technologies is still tenuous; many of those currently involved in the project are young and educated mainly in a western tradition. Currently, one of the project's major shortcomings is to link traditional forest knowledge and the cosmology of a balanced ecosystem with the appeal and prestige of western technologies. Research and training, both socio-cultural and technical, is urgently needed to create means that will encourage and enable indigenous people to link their knowledge with acquired skills.

E. Indigenous people in the national and international arenas

Indigenous people in Central and South America recognize that the only way they are to survive as peoples and preserve their homelands is for governments to recognize them legally and title their territories. Colonization, agribusiness enterprises, logging, mining, and oil exploitation threaten their collective land base. They know that without a legal title they cannot successfully defend what has been traditionally theirs.

For over two decades, indigenous people in Ecuador have worked to regain control of their lands through their own local, regional, and national organizations. This process is still unfinished. These organizations, including ethnic federations such as FOIN, are concerned primarily with the empowerment of their base communities at the local and national level, with maintaining their ethnic identity, and with the recognition of their use and control rights to land and natural resources.

FOIN is not unique. Faced with broad regional problems, federations in the Amazon

Basin have begun to organize internationally. Beginning in 1984, ethnic federations from the rainforest regions of Brazil, Bolivia, Peru, Ecuador, and Colombia joined to form the Coordinating Body for Indigenous Peoples' Organizations of the Amazon Basin (COICA). Originally established to give voice to groups rarely heard in international fora like the United Nations, COICA leaders now speak directly to national leaders and officials of multilateral lending agencies such as the World Bank and the Inter-American Development Bank.

More recently, COICA reached out to the international environmental community. In 1988, Indian leaders met in Washington, D.C. with environmentalists to present their needs and concerns. In May 1990, as a follow up to this meeting, COICA organized the First Summit Meeting of Indigenous People and Environmentalists in Iquitos, Peru to formalize an alliance with environmentalists to defend not only the Amazon forest but also its people. COICA made it clear that the best means to conserving the Amazon is to give control of the forest to indigenous peoples:

As our conservation measure, we propose that our territories be legally recognized in each country, that the Amazon be under the control of our organization and not under scientific experts or government officials who have no relationship to the land. It is the only way that we can save our homeland, future and life itself (translation from Chirif, Garcia, and Smith 1991: 181).

Where the Quichua once reacted to land encroachment by adopting non-indigenous practices such as cattle raising, they are now attempting to pursue sustainable, forest-based use of their habitat. Although their traditional view of the environment is not romanticized, and would be regarded by outside observers as conservationist, their current efforts look more toward western technologies.

The Quichua and other indigenous people are searching for economically and environmentally sound alternatives for preserving their land base. Yet few, if any, of their programs extensively combine traditional and new technologies in an innovative system. Part of the reason is that projects are not often headed by those possessing traditional expertise, but by those, younger and more urban, who favor modern technologies. A mechanism needs to be established to incorporate the views of local inhabitants, especially elders, in the planning and execution of these projects. Many projects speak of combining these systems but fail to do so in practice. Donors and government policies need to support activities that will encourage the combination of traditional practices with new technologies.

F. Recommendations

Regional resource management must be a cooperative effort from the outset. It is not solely a matter of "incorporating local people into program design." Faced with a variety of external influences, the Quichua have become accustomed to responding defensively; they take a similar attitude toward proposed resource management projects. Externally designed programs

are often seen as imposed and are questioned from a political rather than technical standpoint. Land rights, not use, are still the major concern, and projects that do not address this problem are rejected. The challenge is to shift from a reactive to a proactive response.

What are needed are effective means for full local participation of representative indigenous organizations in the planning, implementation, and evaluation of sustainable projects that affect indigenous people or that take place in their territory. These means must take account of local people's broad political and historical concerns. In pursuit of global environmentalism, developers and conservation planners have designed land use programs for Indian lands without consulting their Indian "beneficiaries". To remedy this situation, it is recommended that conservation and development institutions:

- Clearly define local participation and community involvement;
- Clearly define "sustainable" -- what is to be sustained?
- Provide long lead-in times for designing projects -- allow people to work at their own pace to discuss and evaluate long-term and short-term consequences;
- Seek means to work with local organizations so that their programs are the sources which "award" prestige to their communities or leaders -- acknowledge and reward local efforts from within rather than from the outside;
- Integrate indigenous traditional knowledge with new technologies in the planning, implementation, and evaluation of projects;
- Understand indigenous peoples' ethnoecological traditions and how they vary or concur with Western ecological models;
- Reach a common understanding of conservation and development. Indigenous concepts of conservation and development are not the same as Western accepted concepts; and,
- Develop appropriate training and methods to incorporate local use and knowledge into management plans.

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III. The Maasai of Kenya

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A. Brief Historical Account of Maasai Land

The history of the Maasai people offers ample and memorable evidence of a nomadic pastoral people. The Maasai world outlook of development is livestock production, from which they earn a simple but happy living. Before colonialism, the Maasai view of land was that it was God-given and therefore belonged to the entire community -- everyone had the right to use part of it at any given time, as dictated by environmental conditions. However, although all individuals had equal rights to graze over an area of land freely, grazing arrangements were mutually agreed upon. For example, during the wet season, people grazed their cattle in the plains because of the availability of grass and water points (dams, water ponds, seasonal streams, etc.). High potential regions with more rain and water points (permanent and semi-permanent) were utilized during dry periods when there was not enough water and grass in the plains. The concepts of individual boundaries and area-fencing did not exist in Maasailand except in those areas reserved for young calves and weak (sick or old) animals; moreover, these latter were for the benefit of the whole community.

Colonial Period

From the outset of the colonial period, the Maasai people objected to infiltration of their community by colonial forces; their resistance to such forces was strong and long-lasting. But in and about 1911, the British forces established an agreement with the Maasai Chief Lenana, by which the Maasai were to lose most of the high potential land (e.g., Laikipia, Nairobi, etc.) and be forced to live in the demarcated territories of Narok and Kajiado Districts, where the British would not interfere with them.

The agreement implied, among other things, that the Maasai lost access to high potential areas which were later divided among individual British settlers. It therefore meant not only a loss of land to the Maasai but also restriction of movement and interaction with other communities. Their demarcated areas became known as "closed districts" until 1967 when they were declared open. It is worth noting that the concept of "closed districts" was emphasized during the state of emergency in the 1950s. This was designed to prevent freedom fighters from

¹ This essay is based on the author's own experience as a Maasai, information obtained from five colleagues in the Diocese, four Maasai elders from Kajiado District known to the author, and a workshop organized by the author with eight Maasai elders.

entering Maasailand, and to isolate the Maasai from other communities.

Furthermore, the Maasai lost a lot of their former "demarcated" areas to National Parks and Game Reserves - the present day Tsavo West and Amboseli National Parks and Maasai Mara Game Reserve for wildlife.

Post-Colonial Period

Land adjudication in the high and medium potential areas of Loitokitok, Kajiado, Ngong Hills, Mau in Narok and Kilgoris became the immediate post-independence land policy in Maasailand. These demarcations were carried out in order to provide small-scale holdings (30-200 acres) to individuals, thus enabling them to produce crops for food and sale.

Immediately following the demarcation of high potential areas, the government moved to demarcate medium potential areas where acreage ranged between 500-10,000 acres per person. These areas were meant to be used for the commercial production of beef. The land adjudication process clearly benefitted the elite Maasai chiefs, politicians, civil servants, and businessmen. Land was given according to status; the higher your place in the social hierarchy, the more land was allocated to you by the government. What happened to the illiterate and poor Maasai who could not participate in this process either because of their ignorance or because they did not believe land could be individually owned?

Those who benefitted from the land adjudication process were those living in these demarcated areas at that time because of seasonal movement and/or those who knew the value and benefit of land as a commodity exchangeable for money. The poor Maasai have now lost the dry season grazing areas because of the changed land-use policy introduced by the adjudication process; they are left only with the arid and semi-arid lands (ASAL) which are still communally owned.

These areas have experienced rapid deterioration of land and human conditions. The deterioration can be attributed to: population increases among the indigenous people; immigration from the high potential areas initially taken by the British settlers and later by other communities; and the creation of National Parks and Game Reserves (these areas being important for dry-season grazing). All these factors led to overstocking in the available areas.

ASAL Policies

As in all other areas of Kenya, ASALs have suffered from shifting policies, which have contributed to the present situation. After the initial stages of pacifying pastoralists with a view to maintaining peace and order, the policy in the ASALs was derivative and indirect until the 1950s. The various actions taken were ecologically unsound and took little account of the socio-cultural basis of the nomadic pastoral systems. Major deterioration in pastoralist conditions was

exacerbated by land alienation and the punitive quarantine regulations associated with the attempt to settle pastoralists.

In 1954, a major policy shift took place, prompted by ecological deterioration in African areas in general and pastoral areas in particular. African land management was identified as the cause of this deterioration, and land use intensification was advocated as its solution. This policy was articulated in the Swynnerton Plan (1954) and the East African Royal Commission. The Swynnerton Plan, in particular, explicitly recognized the special attention that ASALs needed -- a major departure from earlier policy.

In 1963, the Range Management Division (RMD) was formed in response to the desperate human conditions caused by the 1961-62 droughts and floods; its mandate was to upgrade the entire land economy by conserving, managing, and developing ASALs. This renewed commitment to ASALs was given further impetus by the publication of the East African Livestock Survey, which emphasized the positive aspect of the pastoral areas for the Kenyan economy, seeing them as an untapped source of a potential livestock export industry.

These ASAL policy shifts were more than just attempts to transform the pastoralists so that they would perceive cattle as a commodity; they also recommended an alternative land use system that would take into account the traditions of the pastoralists in the ASALs. As the 1954 East African Royal Commission stated:

In sum it was intended that the pastoralists, the Maasai in particular should have a system of "transformation", which would enable them to operate commercial enterprises. They would avoid rapid change which might upset traditions, create large numbers of landless people and transform land into an economic good subject to free buying and selling... They should be offered simpler instruments than the Company Act for carrying out this transformation. It provides an evolutionary or transitional mode of change based as far as possible on the traditional way (p. 90).

Group Representatives Act (1968)

As a direct consequence, the Group Representatives Act (1968) was passed as the official instrument for the realization of these expectations. The Act allowed groups of pastoralists to register a large block of land with fixed boundaries after which its selected representatives would be incorporated by the registrar of groups representatives, thus forming what now came to be known as a group ranch (GR).

The Government also introduced the Kenya Livestock Development Project (KLDP), whose objectives included the establishment and development of GRs, the promotion of the livestock industry, and the general development of ASALs. This project was funded by the World Bank and was to be implemented in three phases. The initial phase of the program was

to study the viability of the GR concept and other forms in the ASALs. Kajiado District was chosen as a pilot scheme for group ranching; the main objective of the KLDP was to introduce the GR concept in all the district's ASALs.

Phase II of the project dealt with questions of GR planning and development. It funded the Range Management Department (RMD) to carry out ranch planning in the GRs and thereafter funded their planned development by providing loans to ranchers through the Agricultural Finance Corporation (AFC). The loans provided were used to develop livestock support infrastructures such as water facilities and dips; they also provided working capital for the purchase and fattening of steers whose profits were to be used to service the development loan. In addition, the project provided logistical support to the RMD for ranch planning, implementation and the provision of extension services to the ranchers. GRs along the Kapiti plains in Central Kajiado were taken as a pilot scheme for these projects.

It is important to note that the purchase of steers from the North Eastern Province (NEP) was made by the Livestock Marketing Division (LMD) in conjunction with AFC personnel and with very minimal involvement of the GRs. The NEP where these steers were bought is infested with Bovine Pleuro-Pneumonia (BPP), a highly contagious and fatal cattle disease. When these steers were brought to Kajiado, a lot of them died; the disease spread through the district, killing more livestock.

As a result of this killer disease and poor management of the steers by the ranchers (who, due to their lack of involvement in purchasing and handling, perceived the steers as Government animals), most group ranchers were unable to service their development loans. This defaulting led to the abandonment of the whole project. The consequence of this failure cast doubts on the future development of the GRs. However, the failure of loan repayment does not necessarily mean a failure of the GR concept. Some of the underlying factors in this failure include:

- (a) The failure of the project implementors to take into account the importance of people's participation in development projects, even in simple activities like purchasing and handling steers. This lack of involvement led to abandonment of many projects in the ASALs; unfortunately, these have been used to assess productivity. Policies which do not take into consideration traditional land use rationales are not only bound to fail, but cause untold sufferings to the pastoralists who ultimately pay for the mistakes of others -- government policies, which they were uninvolved in formulating.
- (b) The high cost of infrastructural development required in the ASAL areas which may not realize payment immediately.

The failure of Phase II, caused mainly by the above factors, has now been used as an excuse to discontinue projects which, had they been better introduced, would have benefitted people in other areas. This trend of abandoning projects in ASAL areas has created a series of

"white elephants" that have been used to evaluate the productivity of ASALs. It is evident that the productivity of these areas has been wrongly assessed; in consequence, they receive low priority in national development. The trend is clearly stated in the National Development Plan 1989-93 as follows:

Throughout the colonial period, the development of ASAL areas was given low priority, a situation that persisted during the first three Post-Independence Development Plan periods.²

Yet the same plan clearly states that these areas need to be attended to because of their high potential. The plan states:

They have substantial potential for development though at higher costs than the rest of the country. Most of the poorer people live in these areas and hence need to improve their living conditions through increased productivity and creation of employment opportunities that would enable them to equitably share the benefits of development.

The increasing problems of soil erosion and environmental degradation, the threat of desertification and the negative consequences of phenomena such as hunger and malnutrition, which manifest themselves most severely in these areas, often call for the diversion of public resources to famine relief operations.

B. Views Held by the Maasai About Land and the Environment

The Maasai have a traditional cultural attachment to land and the environment; both are sacred to the Maasai community in the following ways:

- All natural resources and living things have traditional names, special uses (plants), and special cultural roles for cultural ceremonies.
- All spirituality of human living is believed by the Maasai to be derived from the Mother Earth.
- Myths, legends and tales about land and the environment are narrated in a sanctified manner, and the aridity of the land and environment is seen by the Maasai as a severe punishment by the Creator, a sign of annoyance for the

² The Government's efforts to deal with these ASAL areas can be assessed at the District level, thus following the Government's District Focus policy. We therefore examine the situation in Kajiado/Narok District, because our present concern is ASAL areas in Maasailand.

destruction of the environment. Droughts and famine are the indicators of the coming punishment.³

- All living things have an equal right and obligation to use and benefit from the Mother Earth. The concept of the balance of nature is seen by the Maasai as their belief supporting theory.
- The Mother Earth can be molded by all human beings for the equal benefit of all, and yet can also be destroyed by one race because of greed and selfishness.
- The Mother Earth can accommodate all living creatures, but the facility is like a wet earthen pot.
- Human beings are co-creators of the Mother Earth but poor and selfish facilitators.
- Pastoralism is part of creation and cultivation is viewed as co-creation; therefore, the Maasai believe, the tilling of land is a curse, an abuse to Mother Earth.
- Marsh, swamps and wells are sacred areas that are respected and no settlements or homesteads are allowed to be created at a radius of 5 square kms. from these sources. Spotless rams and steers are annually sacrificed for these areas.
- There are special tree species that have special uses and hence are highly protected, e.g., Iretet and Oseki.
- Land and the environment are seen as a granary for all natural foods.
- The ecosystem can be destroyed when the aforesaid traditional views are ignored, especially when the ecosystem is viewed as a spider's web held together by different, but complementary, threads.
- The new concept of land ownership is alien to the Maasai and has contributed to the indiscriminate destruction of the environment. The Maasai believe that all living things are in transit on this land and its environment.

³ The Maasai pull together and sacrifice spotless rams and steers to the Creator and Mother Earth.

C. Competition for Land on Traditional Draw-Back Areas

The worsening competition for land on traditional draw-back areas is a recent phenomenon, but one increasingly experienced by the Maasai. Wildlife tourism, pastureland, and farming are currently the major conflicting activities in the traditional draw-back areas.

Land and Wildlife Tourism

Since time immemorial the Maasai have been wildlife custodians. Wildlife is seen by the Maasai as sustaining the overall ecosystem; they have never conceived of wildlife being in competition for land with livestock. It was only after the introduction of the National Parks and Game Reserves that the alien industry of wildlife tourism created an imaginary conflict between Maasai and wildlife. The Maasai began to question the state's drawing borders to separate Maasai and wildlife.

The competition for land between wildlife and pasture surfaced when the Maasai came to realize that wildlife could be harvested for tourist income. They noticed further that the state paid more attention to the wildlife industry than to their livestock and land, and that the best parts of their rangeland (medium potential) with permanent flowing streams and rivers together with the lost dry-season grazing areas, salt licks, and swampy and marshy areas, were all reserved for National Parks and Game Reserves, such as the Nairobi National Park, Amboseli National Park, Tsavo West National Park, Chyulu Hills Game Conservation Area, and Maasai Mara National Park; even the great Serengeti National Park in Tanzania is within Maasailand.

Once these medium potential grazing lands were earmarked for the wildlife tourism industry, the Maasai started to experience significant competition on the rangeland for their livestock. Worse still, the Maasai, whose best grazing lands were lost to state promotion of the wildlife industry, still accommodate over 60 percent of wildlife in their GRs without compensation for the land, grass, and human lives destroyed. Although the wildlife tourism industry is the major foreign-exchange earner in Kenya, and the Maasai serve as wildlife's main custodians, they receive almost nothing from the industry.

Pasture Land and Farming

All high and medium potential lands are either owned by the State or non-Maasai. Eighty percent of the arid and semi-arid land is owned by the Maasai themselves. The fragmentation of Maasailand has led to the Maasai losing the wetter parts that were used as dry season grazing zones. The arid and semi-arid zones now occupied by the Maasai can no longer support the large population of livestock. This concentration on the semi-arid zones has created a fragile environment very vulnerable to drought, overgrazing and soil degradation. Some of the original vegetation has disappeared.

The Maasai are quite aware of the prevailing natural environment degradation which was brought about by:

- land ownership/tenure;
- population influx from outside Maasailand;
- lack of proper ASAL land policies;
- buying and selling of land - change of land use and interruption of the ecosystem;
- concentration of wildlife in the semi-arid fragile environment - wildlife migratory routes disturbed by the new land tenure system;
- laxity in the execution of the law that governs care of the environment; and
- lack of extension programs to educate farmers about proper land use. Extension services and programs on soil conservation only exist in urban and farm-agricultural areas, not in the pastoralist rangelands.

The State is aware of the increasing competition for land between rangeland/pasture and farming activities on the traditional draw-back areas. However, there seems to be an implicit policy of settling non-Maasai squatters in the so-called "wastelands".

D. Mechanisms the Maasai have Developed to Cope with Environmental Deterioration

Population Pressure

Until now, population pressure has not been on the Maasai community's agenda for discussion. Nor is there a felt need to discuss it, despite the great population influx to Maasailand, which is causing environmental deterioration through cultivation and wanton forest destruction. The Maasai themselves have not developed nor adapted any mechanism or mode of production to cope with this pressure. Instead, they have opted to move out of the high potential lands and give way to the cultivators. There is great fear that they may not be able to move further; at this stage, they might gradually cease to be a pastoral community and become squatters or laborers on their own land.

Inappropriate Farming Technologies

The Maasai have developed a strong sense of apathy now that they no longer control their

former high and medium potential areas, where, to a large extent, environmental deterioration has been caused by the inappropriate farming technology brought in by newcomers. A few elite Maasai have adopted large-scale wheat farming, but the majority have opted to sell their parcels to newcomers, since they are no longer economically viable for livestock.

Overstocking and Drought

To the pastoralist Maasai, environmental deterioration is not caused by overstocking and drought; rather, the cause of overstocking in Maasailand is the new land tenure system. Land demarcation and ownership have fragmented the land and limited free livestock movement within and about Maasailand. Further, they have resulted in the Maasai's loss of dry season grazing zones to the newcomers.

Given these factors, the ordinary Maasai cannot believe that overstocking causes environmental deterioration. The ASAL areas of Maasailand are very vulnerable to prevailing droughts which are becoming (more or less) natural mechanisms for destocking Maasai livestock. Otherwise, the Maasai have not developed or adopted any mechanism or modes of production to cope with the environmental deterioration caused by overstocking and drought.

E. Subdivision of Maasailand

The President advised Kajiado residents to have their group ranches subdivided and each member gets his title deeds to avoid differences in the future. He directed the Head of the Civil Service and Secretary to the Cabinet, (...), to send a surveying team to Kajiado to demarcate the ranches. Kajiado District Commissioner was ordered to form a committee to oversee the demarcation. (Kenya Times, Saturday, April 15, 1989.)

The President directed the Head of the Civil Service, (...), to send a team of surveyors to Kajiado District to demarcate the land so that the owners of the group ranches can get title deeds for their land. "The issue of having group ranches will create problems in future" he said. (The Nation, Saturday, April 15, 1989.)

It is difficult to know if the words of President Moi should be interpreted as "fatherly advice" or as a decree. However, the sudden and unexpected Presidential announcement of the necessity for subdividing GRs will definitely influence the future of the Maasai. Immediately after they realized the importance of the President's words, the Maasai grouped together to discuss the consequences. There is now considerable fear that the impact of subdivision will be extremely negative for the Maasai. Although the government argues that subdivision is advantageous for Maasai people (e.g., to get title deeds which are necessary for obtaining loans), the main force behind subdivision is the need of other tribal communities and, in particular,

business people to buy land in attractive areas. The communally owned GRs have made it practically impossible for outsiders to buy land in Maasailand near the tourist parks. To this elite, it therefore becomes essential that the group ranches should be subdivided and privatized.

Despite its problems, the GR system is preferred by many Maasai over the announced subdivision, in which all land would be demarcated and owned by individuals. The reasons given are as follows:

1. The Maasai people, except for a few who have gone to school, do not understand the value of land. Land in their perspective is like air, something available and accessible to everybody, given by "God". Those GRs which are already subdivided have shown that Maasai people sell their land immediately, without realizing that areas they can go to for free are becoming more and more limited.

2. The only source of income for the Maasai people is livestock. Their culture provides them with a system with which they can preserve arid and semi-arid areas -- which have always been part of their living areas -- in such a way that certain areas are put aside in periods of drought in order to keep grazing areas in good condition. Although lately it has become more difficult to do, it still works within and among GRs especially where upgraded cattle-breeds are introduced. However, in the fragile (semi-)arid areas it may even become impossible to keep livestock on an individual basis on small plots; there will be soil-erosion, overuse of water-resources and desertification.

3. The areas to be divided are qualitatively very different. The Member of Parliament who asked for the subdivision has already admitted that the areas near wild-parks (important for the tourist industry) and roads have already been divided among Nairobi's elite. The remaining areas will also be divided according to political or economical status, meaning that the poorest Maasai will receive the least potential areas. The tension caused by this problem has already caused fights and even death in several GRs.

4. The above is even more problematic for women and youth with their families, who are not allowed to be registered as members of GRs. They have no rights to request plots.

5. Subdivision is unlikely to increase the rate of school attendance. Although Maasai education is of paramount importance in the present situation, where Maasai should try to find alternatives to their way of living, Kenyan education is prohibitively expensive, especially for those who cannot make a living on the plot they have received after subdivision.

F. Traditional Maasai Views and Worries About Subdivision

1. As a result of subdivision, it is expected that livestock rangelands will be turned over to other uses. Subdivision will therefore cause a drastic drop in Kenya's beef production since these ranches are the country's major meat suppliers.

2. Many nomadic Maasai will not be able to handle the small holdings; hence they will sell and lose their land, and become squatters. This will cause increased urbanization and unemployment.

3. Given the varying geographical features of the land (including potentiality and size), not all people living in GRs will benefit equally from subdivision. It will be disadvantageous especially for young unregistered members and women.

4. Local, traditional Maasai leaders will disappear because of the influx of non-Maasai people from outside.

5. Due to the alien concept of land ownership for Maasai, subdivision may lead to a disastrous changes in Maasai lifestyle.

6. Individual land ownership in Maasailand may lead to a substantial loss of wildlife habitation, because there will be no longer be the necessary outlet from the game parks to the rangelands. At present, over 60 percent of the wildlife in Kenya roams in the rangeland and national parks in Maasailand. A drastic reduction of wildlife will destroy the tourism industry and its foreign exchange earnings.

7. Due to indiscriminate use of land for other purposes, and given the aridness of the land, there will be tremendous soil degradation and erosion problems. Because of the fragility of the ASAL areas, high pressure on water resources, forests and swamps may cause irreversible desertification.

8. Due to inevitable development changes and the forced adoption of an alien lifestyle, possibilities for the Maasai's survival will be limited. Individual families will have to look to their own basic survival, which might destroy the Maasai as a people.

9. It is expected that subdivision of the GRs will lead to drastic intensification and commercialization of agricultural production. However, this expectation may not be met due to the environmental limitations of those areas. These limitations will become even more severe if basic resources such as water are not available on every individual range.

10. Subdivision is expected to encourage selling of Maasai areas to outsiders. Most of the small plots will not be economically viable nor suitable for traditional livestock keeping, which requires vast areas of land. Only rich outsiders will be able to buy areas of land large enough to be economically viable. The Maasai will be pushed away from their land and consequently impoverished.

11. Due to the colonialist conception of the Maasai, they were not provided with education. This has had the consequence of making the Maasai relatively unresponsive to innovations. Even in the present situation of GRs, the education of Maasai people is very limited. Because of their expected economic marginalization, it seems unlikely that subdivision

will lead to improved education for Maasai given the contemporary cost of education in Kenya.

12. Because of the low capacity of the subdivided areas, it is expected that men and older children will move to urban areas to seek employment. This will intensify the workload of women who, through agriculture and zero-grazing, will have to provide food and income to small children and old people from the available land. Due to expected environmental and ecological deterioration and the inaccessibility of basic resources such as water and fuel, the workload of women and small children will be further increased.

13. The traditional control of family property by Maasai men will be contradicted by their move to urban areas. This will increasingly create tension and conflict within the family setting among husband, wives, and sons.

14. The alien notion of land inheritance will create conflict between fathers and sons and between men and women.

G. How the Maasai intend to solve the conflict between a nomadic way of life (which worked well before) and changing discriminating conditions today

- By persistently refusing the proposed subdivision of GRs, and by requesting the local land control board to put a total ban on selling and buying of land within ASAL areas.
- The collective cultural organization which held the Maasai as one community is now to be replaced by cooperatives. Through these cooperative movements the Maasai intend to reclaim their lost dry-season grazing zones by collectively buying it from the new owners.
- The Catholic Church in Kenya has created a development education program to inculcate greater awareness among Kenya's marginalized communities. The Maasai are fully involved in this development program.
- The elite Maasai see the need to revive and strengthen the deteriorating traditional cultural values of the Maasai; these values and traditions are seen by the Maasai as a power to hold them together as a community.
- To benefit directly from the wildlife tourism industry.
- The Maasai would like to see education in schools within ASAL areas be acculturated.

H. How National Laws and Development Programmes Either Conflict or Correspond with the Above Views

Conflict

- The present land tenure system conflicts with the free movement of nomadic pastoralists and hence their way of life also.
- Registration and land ownership are alien concepts that conflict with communal land ownership.
- Introduction of loan schemes that require land titles as security.
- The separation of wildlife from people, and concomitant ecosystem adjustment.
- Intensive commercialization of land and the environment.
- New conservation innovations that ignore long-standing Maasai conservationist traditions and cultural values.
- The top-down approach to planning, decision-making and program implementation.
- Lack of proper land-use policy in ASAL areas.
- Laxity in the enforcement of land laws.
- The role of experts.

Correspond

- National laws and government development programs will correspond with the views of the people, if the newly introduced policy for District Focus for Rural Development is strictly adhered to at all stages. Presently, various bureaucratic bottlenecks are undermining the original intention of this policy.

I. Policies and Programmes that could take Indigenous Views of Land and the Environment into Account

- A community survey to identify the felt needs of the people should precede any proposed rural project/programme.

- The community should be involved and fully participate in analyzing data collected from the community survey. This could be done through development education awareness workshops to be held at the village level.
- The people, who are beneficiaries of the project, should be seen as partners from its initial stages through to the actual implementation of the project.
- The role of any "expert" should be seen as that of both a teacher and a learner.
- The idea of cost sharing ought to be introduced in every rural project; this will help to eradicate dependency.
- Formation of indigenous environmental conservation committees.
- Livestock improvement projects:
 - animal health
 - livestock upgrading
 - promotion of local range-management techniques
 - livestock marketing, routes and markets
 - promotion of livestock cooperative groups
- Land tenure and resource management programs
- Indigenous land and environment programs.
- Indigenous community-based population control programs, designed and implemented by the people themselves; these should be non-scientific but based on indigenous social setting.
- Community wildlife farming programs, leading to the community's running and owning national parks.
- A change in donor agencies' policies could hasten implementation of the above-mentioned projects; if funds are channelled directly through NGOs, many of the present bureaucratic bottlenecks that hinder faster implementation of most bilateral donor programs could be avoided.

IV. The Samburu of Kenya

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A. Background

The Samburu are a tribe of nomadic pastoralists, numbering approximately 70,000 and now inhabiting Samburu District (21,000 km²) in the semi-arid north of Kenya. They are ethnically and linguistically related to the Maasai. Oral tradition suggests that during the nineteenth century the Samburu moved from the south-west into what is now Samburu District, capturing grazing-grounds from neighboring tribes: the Turkana, the Borana and the Laikipiak Maasai. They have always been keepers of livestock, principally cattle, which are the basis of their economy and culture. Samburu District is characterized by an unreliable rainfall, both seasonally and annually. Consequently, the availability of pasture for livestock varies with season and location. The Samburu practice both nomadism and transhumance to deal with this variance.

There is a stereotype of the Samburu as having an irrational and undue regard for the non-economic value of livestock. This, coupled with "the tragedy of the commons" theory, whereby it is rational for an individual to increase the number of animals he owns because there are no restrictions on their access to commonly owned pasture, is often seen as the cause of environmental degradation and proof that the Samburu mode of production is essentially maladaptive. This report seeks to present the Samburu point-of-view on this and other environmental issues.

During discussions, the phrase "the Samburu land is special to them" would often occur. Given this, it seems strange that they would either disregard environmental degradation if it were occurring in Samburu, or be unresponsive to agents of change, seeking to protect or enhance the

¹ This report was prepared by Gabriel Lochgan, a Samburu, Field Director and co-founder of Samburu Aid in Africa (SAIDIA). SAIDIA is an NGO working exclusively with the Samburu for integrated development in Samburu District, Kenya.

The report was compiled over two weeks in June 1991 through extensive discussions with Samburu elders and with tape recordings, taken at SAIDIA's Ngilai dispensary, of a series of conversations between Mr. Lochgan and SAIDIA's Field Coordinator, Sammy Lentekunye, concerning the environment, Samburu attitudes towards it and previous efforts of environmental control in the area. All direct speech from these recordings is shown in italics. The final version was completed at SAIDIA's main office by Mr. Lochgan and SAIDIA's Project Director, Neil Turner. However, this report should not be taken as expressing the views of SAIDIA or of any one individual employed by SAIDIA.

environment.

Because many of the ideas expressed here came from discussions with a great many different elders, some of it may seem contradictory. This cannot be helped; there is no single environmental view held by all the Samburu. In addition, a great deal of hearsay, rumor, or superstition is included as anecdotal evidence. This is because environmental program planners need to understand not some objective "truth" about the environment in Samburu District, but rather what the Samburu believe about it.

While this report was being compiled, a particular environmental issue was under discussion at Ngilai. The elders had discovered that a form of acacia, which has seed-pods goats particularly relish, were being systematically shaken to bring down the fodder. They met and agreed on a curse on those who were doing this, as it was preventing the natural process of seed-dispersal for the trees. Sammy Lentekunye remembered another recent curse:

We had a baraza² here and its a tradition, something like an acacia or any big tree - they are not allowed to cut down. It is cursed. It is very bad. In any society or culture people do bad things so it still happens. When something is cursed, it equals putting a law on it. Small trees can be cut for fencing - OK, but the big trees, no, especially for the old people. If you are married you are old, and if you cut down a big tree they always believe that you must die.

Cursing is the major control mechanism in Samburu society; it is universally believed in, although its use is rare. Either a person or an activity can be cursed, and this is carried out by the agreement of elders.

B. Samburu Culture and the Environment

Being closely linked to the environment, the Samburu have a highly developed sense of its importance. "Environment", however, cannot be directly translated into a Samburu word. Ideas on the environment are passed from one generation to another through meetings, with reinforcement from curses. Awareness of the environment's importance begins at an early age:

Your father will be telling you when you look after cows, "this day go through here, now take this route" and you will slowly learn why he is telling you that. When you become a morar³ you will be allowed to attend elders meetings when they discuss and decide; "all families would move to this or the other side," "all cows should be driven to some place for this period because we want this

² Meeting.

³ Warrior.

land to recover here. "

The Samburu talk about the environment through their songs, praising its protection and upkeep from generation to generation. They also bless the land regularly. Riddles, tales, songs are all learnt:

... from your grandparents who are not active in anything else. The children sleep at their grandparents' houses and learn all the time.

Land has never been divided in Samburu society except by clans; each of the eight clans dominate a particular area.

The whole clan takes care of that land. If another clan comes to stay with them and they spoil the environment, they will call a meeting to discipline that clan. Perhaps tell them to go away because they are not using the dam correctly by bringing the cows from all directions. But if the rules are followed they can stay.

The Samburu are aware of the tragedy of the commons:

If land is owned by a group of people you should also set some very good laws or system that can protect the environment.

They also believe that land can be owned individually:

They have always fenced small areas of their own for cows and goats. In every manyatta⁴ there is a small area for the animals at night, and sometimes not so small, up to five acres fenced by thorn bushes. And if you ask if anyone else is allowed to go there they say, "no, why can't he fence his own?" People have to wait until they are invited into a boma⁵. Sometimes if it is very late at night you can go in and introduce yourself and then the people will allow you but you can't say that because we live in a communal land even the manyatta is communal. You have to ask who owns that place.

Even wells can be individually owned:

You can find so many unprotected wells along the river bed but you can't go to a well without knowing whose it is. If I am a visitor going through Ngilai

⁴ Samburu dwelling.

⁵ Area around manyatta fenced for animals at night.

with my cows, I will inform the wazees⁶ that I am so-and-so, I'm from this place, and I am going this direction. "How is the land?" And hey will tell you its good, "but don't go through that area because we have cursed anyone going through there because we want it to recover." So if you want to go in that direction you have to divert.

There are several other controls:

If I am digging my own well no one will restrict me on how deep I am to dig, but if there is a reason why I should not dig a place the wazees will always come and say, "no, you cannot do this here; this place is cursed." If there is no reason why I should not, then I can just go ahead.

Although the Samburu do not plant trees, they do carry the seeds of useful plants to new sites:

There are some kinds of trees that they planted but not those they don't have use for. For example, the gourds for storing their milk. When they are moving, they will carry the seeds and then plant where they will settle to get the gourds again. They also plant tobacco and pumpkins. They don't plant natural ones as the animals do that job for them in their dung. There are some trees with seeds that need to be boiled before you plant them but the stomachs of the animals do that better.

These practices have been largely ignored by implementing agencies wishing to introduce environmental projects.

C. Recent Environmental History

An adequate examination of Samburu attitudes to the environment requires some reference to their experience with the colonial administration of Kenya, which was the first outside influence bringing specific ideas on "the environment". By all accounts the interaction of the Samburu and the colonial administration was marked by deep mistrust on both sides.

In 1956, the Leroiki plateau was divided into 244 blocks of about 1,600 acres each and by 1961 this scheme covered about one third of the District. Those living in the blocks were expected to sell any excess stock, with the government defining the meaning of "excess." Two other colonial controls proved unpopular: the "forest line", restricting movement into the forests; and the introduction of chiefs, a totally alien concept. Both were maintained following Independence in 1963. The Samburu have particularly resented the imposition of environmental

⁶ Elders.

policies by force:

We just said "let us go into the forest and see what they are preventing us for." People did not like the colonial government grazing schemes - "this side of the road for three months, the other side of the river for three months," fines, grazing guards. "On Saturday that side will be closed," so every manyatta moved for "Rotational Grazing," the land will rest and there will be no erosion. You see we had already been doing the same thing. In July we expect much rain in Maralal, so people move and in December much rain here so they move back having left it to recover and not just because they want the green green pastures - they had their own law - they value the land because without it there will be no Samburu. They know the issue very well. The colonial government was doing the same and perhaps the Samburu needed to be reminded that they didn't like it. People normally don't like outsiders coming; no one created awareness and they used force. The Samburu have a very low opinion of outsiders and there were other things that the Samburu did not like: during the war they collected bulls and fat cows, separating the best ones and driving them away. So even if they came telling us the best things we didn't listen because we had to accept them through fear and were not motivated. They always expected something behind it. The colonials built much hatred towards new ideas.

The Samburu did, however, respect the efficiency of the system:

Goats were moved completely out of Leroiki Division. For cows, every one was given a number, ten, twenty, or thirty. And everyone was given a special permit and there was a copy of it in the Agricultural Office. So they came and checked if your cattle deliver. And then a marketing month was organized in a certain place when any born were brought and slaughtered.

Because of their colonial imposition, even normal controls on livestock to protect the environment were largely abandoned following Independence:

In the sixties, everywhere was green and there was no erosion and at Independence they said, "we are now free, there is no command anymore." People said they were disturbed because they were not allowed to make decisions themselves so when the muzungu⁷ went, although the rotation was the best system, because it was the muzungu way, people stopped that and just went anywhere and forgot even their own traditions.

The British had put bore-holes everywhere so there was no problem. Immediately after Independence, the politicians said the bore-holes were muzungu

⁷ European.

so all of them were spoilt by putting holes in the pipes.

The Samburu feel their marginalization in Kenya began at Independence:

In Archers Post there was a slaughter house. After Independence the Samburu were not active in politics as they had sided with the colonials during Mau Mau as askaris⁸. So development was stopped in Samburu by using tricks. The politicians said "you know why the muzungu put a slaughter house in your District, it was because they wanted to wipe[out] all your animals. What do you say?" and they said, "Oh, if that was the case, we don't want it." So they moved the machines to Kenya Meat Commission in Nairobi. And they told them that the bore-holes were to deplete all the water in the ground, "so that there will be no grass for your animals."

In terms of trust and credibility, the damage done at this time remains one of the main obstacles to effective environmental interventions in Samburu:

The colonial and post-independence experience has made them lazy for the last twenty years. Now they are going back to their old system yet there is no room and people have multiplied and movement is controlled.

D. Competition for Land in the District

Population

Population growth is perhaps one of the most obvious pressures on the environment. The Samburu maintain it is a recent phenomenon:

There was no cause for alarm because before there were maybe five maryattas in the whole of Ngilai sub-location and now there are more than three hundred families. And they all have a lot of animals. Environmental deterioration because of more people is just something that is very recent. That is why they have not devised any real solutions.

The growth of other populations outside Samburu District has also affected them:

Rotation was easier when people were very few. Now they cannot move because of boundaries. Even after Independence, the Samburu could move to Boran country or the Borans could come this way. Now, people are aware that

⁸ Soldiers.

this is the Samburu border and even though I know the place very well and my father or grandfather used to live there I will be chased by the neighboring tribe. They don't want people there because their population has also multiplied.

Sedentarization

The Samburu recognize sedentary life as a threat to the environment and have long sought to avoid it. They have always valued their nomadic existence as a means of avoiding over-population and over-grazing in one particular place. However, because of the pressure of land and the Government's policy of encouraging settlement, sedentarization has become more common and increasingly threatening to the environment:

There was very thick bush and the town came there so they started building and cut the trees for charcoal. They have already changed their customs and that is also causing environmental deterioration. Because people have adopted farming, settling in towns, they have changed. Because of schools, hospitals, they don't want to move from this place and they end up staying around and forget their customs completely.

Refugees

The north of Kenya has experienced large influxes of refugees from neighboring countries, thus fuelling population pressures. However, this is not yet a significant issue in Samburu:

The people of Marsabit were complaining about the refugees. There is a very big camp, with four thousand. (This was before the Ethiopian problem.) The Government gave them land to cultivate, and they are now owning land because they are hard working. So it will be a big problem but still not an issue in Samburu. But we also have our neighboring tribes who come in and settle and they also take the land, like the Turkana or the Kikuyus. They are now getting land slowly from the Samburu.

Wildlife

The Samburu are very aware of the impact of wildlife tourism. Its introduction has mostly taken the form of restrictions, and their attitude towards it has consequently been almost entirely negative. The Samburu do not kill wild animals, with the rare exception of lions that kill their stock.

The Dorobo, a tribe of hunter-gatherers who once lived in symbiosis with the Samburu,

but who are now virtually extinct, did kill animals. However, the Samburu maintain that this was a form of animal husbandry, not destruction:

For the Dorobo land was divided. They said that this lugga⁹ belongs to so-and-so and that is where they kept their hives. Even animals like buffalos could not be killed by someone from another place. The Dorobos protected the forest and husbanded wild animals, which they killed for food just like the Samburu do with cows. Therefore there was a feeling that this was "my thing". They were doing nothing with the trees because they believe that bees like a dense forest.

Over wildlife issues, the mistrust between the District administration and the local people is very apparent:

At a recent baraza the local people were complaining about game-wardens disturbing herd-boys and cattle. Elders went to the game-camp and said "there is nothing else we can do so now we must fight as you have the intention of taking our land". They were worried that there would be a gate here. Now there is to be a "wildlife protection zone", which was discussed in the last District Development Committee (DDC),¹⁰ and the Councillor did not even attend that meeting and no one has informed them so they just don't know anything.

In general the Samburu attitude is combative:

I was talking to the Councillor from Ngilai and he said, "that is just you talking in the DDC, no one can take our land or our livestock - this is where we live. We are not poaching. Let them come to the forest and guard the animals but they should not bring that trick of calling it a protection zone. The Councilors in Maralal gave our land to the Kittich Lodge,¹¹ we didn't want it there. Now we can't go near that place". He was very bitter.

The Samburu stress that they live in peace with wild animals and that they do not poach:

We protected the wildlife and we had at least 70 rhinos here. We were living with the animals. If we wanted to kill them we could have finished them completely. The colonials found us here with them. It was just the poaching which has done for them. We are aware of all this competition and we don't want wildlife tourism to be introduced, even if it will earn Kenya money which

⁹ Dry river-bed.

¹⁰ DDCs were set up under Kenya's "District Focus for Rural Development" strategy.

¹¹ Kittich Lodge is a tented-camp for tourists 10 km. from Ngilai.

might be used to develop Samburu.

Although aware of the connection between tourism and developmental revenue, they fear that if they agree to an area being used for tourism they will be excluded from it. Their frustration on this issue has no real outlet apart from stubborn refusal:

We realize that that Government is behind it so it will come whether we like it or not. We will jump up-and-down to try and get other land somewhere. We will not accept and if we see that we will not succeed we will just stay.

Crop Production

Agriculture has been introduced in what are termed "high potential" areas. These are located mainly on the Leroiki plateau, excluding the forest around Maralal. Unfortunately, this area has served as one of the major draw-back areas for the Samburu in times of drought:

In the non-forest, very fertile areas--the draw-back areas, the land was already demarcated. So many people went there and they got pieces of land, in the form of Group Ranches (GRs).¹² People sold them despite the Samburu elders trying to prevent it. For example in Maralal: first Kikuyus rented land and then by tricks appropriated it with the courts on their side. Maralal is not Samburu, its just a mixture now. A GR is so-called because no one single person should buy or sell it.

Farming is acceptable to the Samburu,

... but they are worried because those don't go in for it, because they are denied access or their area is unsuitable, will be left with no good land for anything; cattle or crops. Yes, they are aware and some changes have come in for the better.

Gazetted Forests

The Samburu see the forest reserves in Samburu as a major interference. The Leroiki, Ndoto, Mathews and Nyiro reserves cover 325,000 hectares. Their use as pasture is restricted and the cutting of trees is forbidden:

The government is very strict and people are aware but they don't like it. They never cut trees and they would only use these areas as pasture during very

¹² The Government method of giving title to common land.

severe drought. They didn't like to stay there because of the many dangerous wild animals, which attacked children and livestock. When they were down in the open the children could look after the cattle easily. In the forest they only gather dead wood. Now, sometimes they even burn the forest¹³ because someone is stopping them from going there.

They see the sedentary populations and not themselves as the threat to the forests:

Around towns and trading areas there is a high demand for charcoal and firewood which leads to deforestation. Here no one cuts but if someone comes here prepared to pay money then they will be tempted to cut. Before the European influence, the Samburu had nothing to cut trees with anyway - no axes. Only spears were made from metal. Therefore, every change has disadvantages and advantages. And people introducing anything to a community must be aware of this and be very careful with something new.

Overgrazing/Overstocking

No issue is more contentious in semi-arid areas than alleged overstocking by pastoralists. Critics contend that excessive herd sizes are a major cause of environmental degradation. Supporters of the pastoralists argue that building up stocks constitutes a rational insurance measure against drought, and that degradation results from externally-imposed restrictions on nomadism and transhumance. Very little has been done to find out what the pastoralists themselves think:

I asked him, "tell me about the land. Are you seeing any change, as you are very old mzee¹⁴? From when you were young to now can you see something happening?" He told me, "yes, its very poor, I don't know why." I said, "but you older people have the answer. I was not there myself, so you know what was good about it before." He said, "I think it is because people have a lot of cows and because we are many. Before people were few". I asked him for a solution and he said, "I don't know." So I told him, "don't you think about de-stocking?" And he agreed but then, "if I sell my cows and I am left with only milking cows, what will I do if a drought comes or disease?" So I said, "you put your money in the Bank." And he said, "where are banks?" So I said, "in Maralal, there is even a post office". But he said "you see we don't know this and if there is a place where I can keep my money, I will definitely do it because I have seen a lot

¹³ Two thousand hectares of the Kirisia forest were recently burnt, probably by a fire started deliberately.

¹⁴ Elder.

of droughts and many animals dying". "If you can educate on these matters we will agree because we don't have an alternative, we just wait to die."

The greatest obstacles to herd-size reduction are minimal marketing facilities and poor communications in the District:

There are no marketing facilities, no organized transport, market days, and no one is even trying to organize or tell the people if there are auctions. They are not told in advance. There are no buyers, the prices are low. They know they can't get very good money in Isiolo and I can't take them anyway because I don't know how, because there are no lorries here. We want to reduce the number of livestock. Selling and either putting the money into camels or even in the bank. But we don't have a good banking system either.

Meanwhile, the Samburu do accept that their livestock has caused local environmental degradation:

Some of them are moving goats to areas like Maralal, where the land is not like here with rocky places suitable for goats. And the goats destroy everything there.

E. Traditional Solutions

The Samburu see their way of life and modes of production as a solution to the harsh environment in which they live. They believe this solution protects the environment's capacity to support their livestock and afford them subsistence. Moreover, the Samburu are continually adapting their modes of production to deal with the problems outlined above. Adaptations include: diversification into other animals (goats and camels); interbreeding to improve stock; selecting areas to be closed to livestock completely or to livestock of a particular kind; herding different kinds of livestock only in those areas most suited to their feeding habits; seasonal transhumance; and complete nomadic movements.

The following description refers to a smallpox epidemic of 1888 or thereabouts, which decimated the Samburu and significantly reduced their stock.

In Baragoi in 1969 when I was there, I found a file marked something like "Important Events" and there was a disaster some time back so the people went to the forest and killed buffalo and even elephants. They moved to Turkana and ate berries and wild fruits, learnt fishing, even ate hippopotamus. Some did not. So now when you come to marry they keep it in their mind and say no you can't marry my daughter because your great-great grandfather ate the elephant. It is a sin. Animals with teeth on both jaws, especially on the upper jaw they don't eat or those without hooves or non-ruminants.

Drought has been a constant feature of Samburu life and has led to the development of various social mechanisms to alleviate its effects:

It has taught the Samburu to keep their animals with relatives or friends or those who are poor. They have a bank with other people. Those people have the milk and if a disaster happens to the owner he will claim back his animals but not all. When you know a drought will come you just go to a rich person and ask for a bull. And he will ask when will you repay the bull to which you reply 'the son of my son will pay' or 'I will pay when my daughter marries and I get the bride-price'. Even if I die my son knows this and nobody ever forgets.

In 1984 I had two cows and now I have more than twenty.¹⁵ You automatically become rich by calling in debts. When you are rich, poor people come and sort of work but you don't pay them. After ten years, you may give them one cow.

Other mechanisms, practiced in non-drought situations, are designed to spread the livestock load on the environment:

People who live in areas with two different climatic conditions like those in dry lands and those in fertile lands cooperate. If I have camels I give them to you and you stay with them and drink the milk. And then I can keep your cows here. They are yours but because my place favors cows you can bring yours in. This happens with the Rendille especially and also the Turkana who take goats because their place favors them. It was not always just war.

We have our own banking methods. If I build a large herd I will give to poor people and not just keep them because I want to be seen to have many. They can drive them very far and all I will do is tell my sons that these people have some of my cattle. I will not ask for the profits of these cows, even if they have multiplied many times. I will get back just the number that I gave. It is one way of helping the poor that gains you respect.

One particular mechanism ensures that some de-stocking occurs in times of plenty, before the land has deteriorated:

Killing cattle occurs especially during the ceremonies. In the El Mugit ceremony they had here they must have killed more than five thousand cows. And they used to do that when the land is very good. People will gather to eat meat to celebrate the land.

¹⁵ It is bad luck to name the number of cows you have.

F. New Solutions

The "environment" is not seen as a separate issue by the Samburu, but as a part -- or cause -- of some of the many interrelated problems and pressures on their traditional way of life. They have had to come to terms with two facts: that there is not enough space to carry on with their traditional way-of-life exactly as before; and that change is going to happen whether they like it or not.

The environmental change is leading to the abandonment of transhumance and nomadism and to other things like trading, which they didn't have before.

The Samburu are very aware of the problems of land competition in the District, but apart from intensifying their use of traditional solutions, which are themselves becoming more difficult to pursue, there are few other clear alternatives emerging:

They are very much aware but they don't have solutions unless they are made aware of the possibilities. They will accept and definitely find solutions. They can accept farming but are not aware of problems such as erosion that might effect the land badly if done on a large scale, because it is something new to them.

However, a willingness to learn from other similar situations is widespread:

I know the Maasai have started doing something because their forests are not controlled by the government. So they move away completely from where they live and leave this place maybe for two years to be green. And when that is happening they have plots where they can grow their grain and they have hand-grinding machines for maize, so they produce everything that they need to eat. Because a cow is what we depend on in everything; food, clothing, school fees, if we finish a cow then it will be the end of the Samburu, so we must find an alternative for a cow. And the alternative is that we can use this land that is giving the cow everything; food for the cow, that we can sell, eat, or milk. The Maasai have found another use for this land - it is to grow food. There is a rude saying: "if you have one wife you must find another one so that the first is not misused till she is finished." And the alternative is to get the farm in tandem with the cow. The Samburu have not even thought about that.

You can compare it with the Kikuyu situation with terraces on their land. They were forced to do it, which they didn't like but now they have adapted it and it is widely practiced. Also the Samburu did not like the Rinderpest treatment and used to hide their animals but now are doing it for themselves.

Certain small-scale individual initiatives could be built on:

A few years ago no one was even thinking about such income-generation schemes as this shamba.¹⁶ Therefore people can agree to farms and such things.

Contours and stag-grass/erosion control like at Sammy's is the exception rather than the rule. Something very new is fencing small areas, which has always been done for old, young, and disabled stock but is now more generally applied.

Some possible solutions or diversifications are known but are thought inappropriate or impossible:

There is no change in cattle production. Not even fodder-banks¹⁷ as there is no rain and no grass to put in the bank. If you decide to do farming you can't because you need rain, you need water for your farm to produce. There are no alternatives. There are some areas where bees can get pollen like the people in Maskita today. But bees also need water and there is no water in that area.

Diversification into camels is perhaps the most widely practiced technique:

A lot of Samburus are adopting camels. Before when you paid your bride-price you were told to bring cows and goats but now you are also asked for camels as a must. They are now buying camels. Every Samburu wants to keep a camel because they know that they can survive in dry areas. When the cows have gone very far seeking pasture they still have camels that can give them milk and also meat. One camel will satisfy the whole manyatta. In Maralal they can adapt to farming because the land is fertile but nowhere else, so we must have camels.

Dietary change has helped to give the Samburu new options:

Because people are now settling down they have chickens and there is a change in their culture slowly coming. In Ngilai, people even eat fish. The elders accept the youngsters don't die of it. The children tell them the fish is good as they don't need to buy it and that you get something good in your body if you eat fish or if you eat eggs. Maybe rabbits later on.

Education is clearly essential, but present educational offerings are seen as inappropriate because they do not include Samburu culture:

¹⁶ SAIDIA's demonstration shamba (vegetable patch) at Ngilai.

¹⁷ Storage of grass in a pit or tank.

Those who are educated are adapting. The culture will slowly change but will collapse if a curriculum isn't introduced that emphasizes the keeping of culture as good.

Inevitably change causes tensions between age groups:

If you ask the young educated Samburu about the elders, then there is a great deal of friction. They just want to wipe these old men. And if you ask the elders, they are just confused with this younger generation, what they are doing. They are the "ones you can't say no to."¹⁸ Because their minds are somewhere else.

G. Present Policies

It is important to examine the existing policies of both governmental and non-governmental agencies working in the area. By and large, the Samburu feel unaware of, but not untouched by, what happens in Nairobi or Maralal:

People are still moving in the way they want. There are cattle from this place many miles away. When the demarcation comes maybe they can settle.

The Government is broadly criticized for its lack of knowledge and concern:

They don't consider the nomadic life; "we must settle the Samburu, they must have shambas, they must have group ranches", and there is conflict. How do they intend to solve the conflict? Are they doing anything? The government has done nothing about over grazing. They cannot even organize markets.

Their objection to the government's policy on demarcation and adjudication of land does not come primarily from the fact that it is alien to Samburu tradition, but from a perception that it is unfair:

If they can accept land demarcation, which they understand will mean group ranches or individual land, it will mean staying permanently and they will not object. Only if it is very fair and there is no corruption. But because there is, that is what will make them not accept. So they will still prefer to stay in their old nomadic way of life.

There are some areas that have already been adjudicated but not all. Here they refused because they are not aware. They don't know the advantages

¹⁸ The official title of the new age set.

of that change. In other areas because of the chief's influence they decide themselves even before consulting the community. The top local leaders are the first to grab.

In Nachola they have their own locally selected leaders, like the councillor, the chiefs and they grabbed first. They were no longer respected and became outcasts in the community. They were being told, "you cannot even talk", "don't even sit near us." They were taken aside and told "sit there, you are no longer in this community if you can do that to us, if you can just be selfish and take all this land. So the cry of that community was, "scrap this completely! If this is the kind of system you want to introduce whereby the rich or the strong are going to take everything we had better live like before when we could just be brothers." There is no respect for those people which leads to confusion because if we respect and chose someone to be our leader and he gets a different type of teaching from the government side, if he doesn't come back but sits there with a different ideology which is finishing us, it is bringing confusion.

The adjudication of land brings other problems for the Samburu:

There are no natural salt licks in Ngilai. In the whole of Leroiki Division it is only Kisima, which has one. If the whole area is demarcated they will not have access.

The local government is viewed as being as alien as the previous colonial administration, albeit less busy:

It doesn't correspond to the Samburu situation. For a start, they are not very active. They will only become active when we have very many Samburus in the administration of Samburu District but right now we have other tribes. And they don't know about nomadic life. If we had Samburu Veterinary Officers and Agricultural Officers then they could help by creating awareness. Only NGOs are doing that.

We have schools but most of the schools and dispensaries are built by NGOs or churches. It is only them that is going right deep with the people. And there are no government efforts at the grass roots level. A government official will say, "how can I go and stay at Ngilai where there is no house, in a manyatta!?" So someone will waste a year that he could have used to create awareness here.

We have a lot trained agricultural offices but they are not supported. Two in one Division cannot cope because they should be located at the sub-locational level because that is where the communities are. They have no transport. The conditions don't favor the extension officers. They cannot be happy with their

work. They are told to go and give-out information in situations where they cannot be happy.

The only veterinary services the Samburu receive is vaccination against some diseases. And if they are vaccinated they become healthy and multiply, which is good for the Samburus but not good for the environment so the veterinary people should look for ways to destock after making this change.

The Samburu are told by the chiefs, "Don't cut trees" and they don't. The Government says "plant trees". The Samburu have never planted trees. They are planted by nature, so they need to be taught new techniques. If that effort is there then people will learn slowly. You can't tell us to build a dispensary when there are no fundis¹⁹ among us.

In District hospitals, they have a family planning program but that is not where the Samburu live. They only go there when they are in a critical condition and they don't go there for that information. They should take these services to the manyatta level. Some ladies come here to find ways of not having so many children because they have heard that there are some drugs available. But we don't stock those drugs here because we need permission from the District level. And they are not encouraging or supporting the small agencies to further these services.

There is no warning of droughts. They just cry to get some help from big countries. They will try to get maize to give out. It is organizations who come in very fast to help.

They wanted to talk about the formation of wildlife conservation. They had a project called the Mathews/Ndotos Wildlife Development Project. It was discussed at the District level but the locals were not consulted because no one came to either the Mathews or the Ndotos where the local people live to ask them whether wildlife conservation is an important issue for them.

So if you come into these people with that subject of wildlife conservation they will say, "but after all we are not killing wildlife, now what do you want". If you want to create some boundaries to monitor the animals, the locals might say no, you cannot create boundaries for us, you cannot bring in restrictions if we are not killing them. If you are fearing a threat, it might be from outside. Find a way to control that. Like stopping ivory poachers but don't restrict us from mixing with these animals. You want to protect them and you don't want our animals to mix with them because the animals will tend to move out of this

¹⁹ Artisans.

forest where they will meet the poachers. So that decision making is not what should be followed. It should be from the village level.

One NGO working in the District was criticized for its approach:

Before they started their work, the local leaders were called to get their views and the views given were just the views of some leaders who were seeing things their own way. When they came here it was supposed to be environment more than what they are doing today. They have changed from the environment to building schools because that is easier. Just because of their approach which was poor. They called for a meeting for us to tell them exactly how to work. They said, "whatever you decide here is going to help us to do our work better. But then later, what I came to discover is that not what has been said is important but who said it. Because you see here I am an Assistant Chief monopolizing the whole thing and there were other big people. You see already they had in their minds what they wanted to do. The issue was environment...afforestation and tree-planting ... so many things.

OK, they wanted to plant trees and maybe use the rain as the only source to let the trees grow natural now. And it is difficult because sometimes the trees are not the right sort for these conditions.

Samburu attitudes to NGOs are positive but there are some who after staying with the Samburu, the Samburu are not getting anything because of the way they were approached.

Food-for-work schemes have been severely criticized:

In terms of the environment, there are some NGOs who want the Samburu to learn more about taking care of it but their way of taking this message doesn't make sense to the Samburus. If you can tell me to plant trees and pay me some food, if you stop paying me that food I will not plant those trees because you have not told me the importance of planting those trees. I can even plant trees today, if I am told the importance of having more trees. Maybe for firewood. The Samburus already know they are good for firewood but we have enough. Perhaps, if they are taught that there are some that can be used for their livestock then they will automatically start planting trees.

H. More Appropriate Policies

It should begin at the manyatta level. And then go up instead of someone coming to District level and getting answers to questions from people who are not even Samburu. The way of seeing things at the grass roots is different. I might

say that grazing schemes would be useful but when you introduce these people might just say we don't want that. I will graze where you said there should not be grazing.

So at least it should be from the manyatta level that any planning should come. They are very prepared to be involved. The Samburu always attend barazas. In Samburu we have a saying: if you are passing and you see a meeting going on never just go on without seeing what is being talked about because it might be something very important that you can take to where you are going.

But there is really no one to tell them. That is why the nomadic way is not working like before. Because of the introduction of so many other things they cannot find their own solutions: move to the Abedares and leave this land, drive away the Kikuyus, go and raid the Kalanjins. That's why the land was not overpopulated or overstocked. If you put in restrictions, give people alternatives. We are ready for them. We are very much aware of the environmental issues but we have no space.

They agree on what they want from the manyatta level and then it goes to the District level for implementation. The District Focus for Rural Development is supposed to work that way but is not working like that because when we first came here we didn't get approval from the District level. The way we understood it was that any development should come from the people. So we came here and discussed with them. "is it a development that the people of Ngilai want?" They replied that it was a development that was needed because they had to walk 36 kms to Wamba for treatment. After we got the approval of the people, the Chief confirmed that this is what my people approved to be done in our place. We went to the Divisional level and the District Officer also said that is OK. After we had decided on a dispensary someone at the District level said no, it is the DDC at the District level which is supposed to plan things. "We know the needy areas and the priorities better than you people." "You could have brought any help you wanted to the Samburu". "You could have consulted us first and we would have told you where this help is to go." Somebody suggested Waso, somebody else could have suggested the Suguta valley. But then everybody is needy. So what makes one place a priority rather than another. It is the local people who were lucky and someone approached them - don't deny them that chance because already a discussion has been made there.

They are accepting dispensaries, schools, because it is not interfering with their traditions. They can change their customs. If they are told when they come to the dispensary (you cannot get treatment if you are circumcised because we do not want female circumcision), then they would disagree with these types of development, but since it is not controlling them that far they are very happy.

Re-empowerment of local institutions would help:

We have problems because we have no say. Before it worked well because it was us who made the decisions but because of first the colonial rule and then the government we are stopped and we just follow what we are told.

New methods should be devised to give them ideas on the environment.

The only difference is communication. I am sure that if the colonial people had been aware of how to communicate whatever they wanted to tell the Samburu could have been accepted there and then. But because they did not understand Samburu, did not have the right way to interpret what they wanted to the Samburu, the Samburus became suspicious. Even some NGOs today don't have the correct approach to communicate. And also time-limits. They are not patient. If you come and you live with the Samburus even for two years before you do anything and then you start they will be much more ready to accept whatever you have to say. So people don't plan sometimes; they just bring planned things. If people can talk with them and agree first they will know what is good and what is possible.

I. Conclusions

The Samburu feel confined and do not want to be restricted in any way, in part because they recognize the damage which occurs to the environment because of such restrictions. Their only option is a refusal to move. They have a saying that goes: "You can never increase the land, only God can do that".

The recognized pressures on the environment are not being addressed by the Samburu themselves:

They are not planting any trees. They are not practicing family planning any more than before. Overstocking they are aware of but they are doing nothing. They want to increase in fact. They are not doing anything today to develop or adapt strategies for the environment. Not even population control by sticking to one wife, reducing the number of goats that I have, planting trees, nothing.

What could be done is to educate the people about the environment first. You try and get them to see the things that you are also seeing because the environment issue today is something that the Samburu should know but are not seeing it the way western people see it? Yes, well what are our reactions. Well, we don't know what to do, "maybe you can help us?" "Let us plant trees." "How are we going to plant trees?" "Where are we going to get the water?"

"We will have to get water." "Ah, trees, and when I have a lot of other problems. My cows are dying, there is no grass. Why don't you say plant grass for your cows instead of trees?" And then that discussion goes on. Maybe you can tell people that if they plant grass it will not be enough for the animals because there are so many, so they could sell and then fence a small area to keep five cows. Otherwise, this question of planning needs a lot of talking to the community first.

Maybe the only program that you can bring in which the local people will be happy with will be marketing facilities for their livestock. Because you can reduce their livestock which will be very good for the land. But otherwise if you come with a programme directly for land like "you must plant trees" they must know why they are about to plant those trees. It is not important to them today to plant trees. If I plant, who is going to water these trees? They might say if you want us to plant trees give us plenty of water either from underground or piped from somewhere. Every time we water our animals we can also water the trees. Such programmes like tree-planting can work without even food-for-work.

V. Tribal Filipinos

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A. Introduction

Tribal Filipinos, also referred to as indigenous cultural communities (ICCs) by the 1987 Philippine Constitution and "indigenous peoples" by organized tribal Filipinos themselves, constitute at least 10 percent of the Philippine population; an estimated 6 million live in upland forest zones. They are found all over the Philippine archipelago, but are concentrated in the hilly regions of the country, particularly in Northern Luzon, the islands of Mindoro and Palawan, and the interiors of Mindanao. Although some individuals within these communities have already been assimilated into the mainstream of lowland christianized Philippine society, as communities they have, by and large, retained many of their indigenous attitudes and beliefs, including those that relate to land and natural resources.

Most tribal Filipinos or indigenous cultural communities (the terms will be used interchangeably) practiced, at one time or another, an integral type of shifting or swidden cultivation. Integral shifting cultivation is a "traditional, year-round, community-wide, largely self-contained, and ritually sanctioned, way of life" (Conklin, 1957). This makes the ICCs "ecosystem people" (Rai, 1982), not only because they occupy a clearly delimited ecosystem, but more importantly, because they view themselves as an intrinsic part of the ecosystem (Bennagen, 1985; Burton, 1985; Cullen, n.d.; Fox, 1952 and 1982; and Prill-Brett, 1987). This form of cultivation was supplemented with hunting and gathering, plow agriculture, cattle herding, and trade.

At present, some groups like the Igorot of Northern Luzon have come to rely more on wet-rice cultivation in magnificent terraces and commercial vegetable production. Shifting cultivation, for domestic consumption and raising cash crops, has become supplementary; hunting and gathering have become minor activities. Other groups have become peasants as well as landless rural workers (Anonymous, 1983; Lopez-Gonzaga, 1982; Yengoyan, 1966 and 1971); still others work in the mines and logging concessions usually owned by outside big business. Moreover, some individuals have had access to westernized economic, political, and cultural institutions and have since become less indigenous in their beliefs and practices. But among these "acculturated professionals" are individuals who have become active in the struggle of the ICCs to claim their right to their ancestral domain as an expression of their right to self-determination (Carino, et al., 1984).

All of these changes have been brought about by continuing interaction between the indigenous cultural communities and the rest of Philippine society, and by the interaction of these with the rest of the world. Since 1972, with the declaration of martial law by the late President Ferdinand Marcos (which was officially lifted in 1981), inappropriate government

policies, inadequate or non-existent basic social services, state-sponsored resettlement, missionary work, trade and commerce, militarization, and the encroachment into ancestral lands by lowland migrants, loggers, miners, ranchers and agribusiness corporations, have all combined to alter drastically the traditional relationships between the ICCs and their ancestral lands. (It should, of course, be pointed out that the history of such processes began with Spanish colonization in the 16th century and continued through the period of U.S. colonialism up to the present time.) Ironically enough, it is the challenge of these various pressures that has stimulated the ICCs, particularly those who have organized themselves, to rediscover and re-articulate their traditional concepts, beliefs and attitudes toward land and natural resources.

This essay on ICC attitudes toward land and natural resources draws on two major types of sources: first, the various seminar-workshops and conferences held within the past 15 years to address the land questions being raised by ICCs and their advocate or support organizations; and second, the various ethnographies and other studies by anthropologists of indigenous cultural beliefs and land-use practices. An addendum to the present article provides some brief reflections on national land and resources law relating to tribal Filipinos.

B. Land and the Tribal Worldview

In a 1977 seminar-workshop on "Tribal Groups and their Worldview" conducted by Roman Catholic churchworkers in Mindanao with 54 representatives of 15 Mindanao groups, one of the questions discussed was: How do you view land? To this question, the answers were (Anonymous, n.d.; Cullen, n.d.):

1. Land is a gift from God which provides everything needed to sustain life. Land is a source of life.
2. The earth is owned by God but since humans were created by God, they have the right to develop the land and are therefore the secondary owners. When they die, they return to the land.
3. Land cannot be sold or bought since according to one group, the Tiruray, land is both mother and father.
4. Land cannot be divided, only the fruits of the land can be divided.
5. Land is plentiful and could be sold cheaply, that is, the steward rights may be sold.

In another consultation conducted in Mindanao in 1985 by the Episcopal Commission on Tribal Filipinos (ECTF) of the Roman Catholic Church, representatives of 11 Mindanao tribes responded to the question: What is your concept of land, its ownership and its use? (Anonymous, 1985). The responses by the representatives from the ICCs were similar to those

obtained during the 1977 seminar-workshop. The summary is worth quoting in full:

According to the tribal participants, land is a blessing and a gift from God and is, therefore, sacred. It is the source of life of the people, like a mother that nurtures her child. Consequently, ... land is life.

Land is also seen as a symbol of identity. It symbolizes their historical identity because they see it as an ancestral heritage that is to be defended and preserved for all future generations. It symbolizes their local identity because they believe that wherever they are born, there too shall they die and be buried, and their own graves are proof of their rightful ownership of the land. It symbolizes their tribal identity because it stands for their unity, and if the land is lost, the tribe, too, shall be lost.

Ownership of the land is seen as vested upon the community as a whole. The right to ownership is acquired through ancestral occupation and active production. To them, it is not right for anybody to sell the land because it does not belong to only one generation, but should be preserved for all future generations.

In 1986, the ECTF conducted a survey on land ownership and customary laws (Cullen, 1986). This time, the survey included groups outside Mindanao, such as the Igorot of Northern Luzon, Hanunoo Mangyan of Oriental Mindoro and the Ati of Iloilo, Central Philippines. The survey showed that tribal Filipinos are essentially "ecosystem people." They depend on the land, the forest and its products, streams and animals; yet without people, there would be no one to cultivate the land. Moreover, the people are also dependent on God or the gods and spirits of the forests, who are the ultimate owners.

An ECTF-Tribal Filipino Apostolate Convention in 1990 focused on clarifying the concept of ancestral domain from the point of view of tribal Filipinos. The participants, mostly tribal representatives from the various regions of the country, came up with the following points:

1. Ancestral domain is a sacred land area, God's gift to a tribe or to a tribal community, the source of their life, where their ancestors lived since time immemorial, and is now claimed by ... organized tribal Filipino community.
2. The boundaries are marked by mountains, rivers, trees or stones, graves and places of worship, or other signs of the native's presence.
3. Ancestral domain includes the forests and their products, hunting grounds and pasture lands, bodies of water and mineral resources and air spaces and all living creatures like birds, animals and fishes. These natural resources are meant to be preserved because without them, the land cannot support the way of life of the tribal community which is determined to defend this land unto death as their

communal inheritance.

4. Ancestral land and its natural resources cannot be sold or alienated by members or leaders of the community, but can only be used, preserving its natural resources according to the customary laws of the tribal community.

5. Non-tribals in these areas should respect the customary laws. Particular arrangements with outsiders can be made only with the consensus of the entire tribal Filipino community but they can never obtain titles or portions of these lands.

6. Apportionment of these lands among natives is only a transfer of the right to use or usufruct according to ancestral laws.

7. All lands -- forested, alienable or disposable -- that are occupied or used for the livelihood of a tribal community can be claimed as ancestral domain.

C. The Cordillera Peoples and the Land

Similar attitudes toward land and natural resources emerged in a Land Congress held in Baguio City in Northern Luzon in 1983, which had the participation of individuals and organizations from various parts of the country, including professionals from the ICCs (Carino, 1984).

One university-based anthropologist, herself a native of the Cordillera, pointed out that the Bontoc (one of the ethnolinguistic groups in the Cordillera), have a very strong concept of territoriality which is governed by inter-village custom-law (Carino, 1984; Prill-Brett, 1987 and 1988). Forests, fishing grounds, and swiddens are communally-owned; their use is free, although only to village members. Woodlots and former swiddens which have reverted to second-growth forest may be used exclusively by the descent group that takes care of them. Ricefields and houselots, on which intensive labor has been invested, are individually owned. In all cases, ownership is based on prior rights of first use such as cultivation, hunting, fishing, or pasturing (several articles in Carino, 1984, make this same point in the context of other Cordillera groups).

Subsequently expanding her study into the entire Cordillera region, the same anthropologist observed that the Cordillera indigenous communities recognize the following natural resources (Prill-Brett, 1988):

1. forest and forest products;
2. water from mountain springs for household and irrigation purposes;

3. rivers for fishing, ritual sites, and also for irrigation;
4. swidden land for food production;
5. pasture land for livestock;
6. mineral land for extraction of gold;
7. clay for pottery;
8. terraced land for rice production;
9. residential land.

Ownership of these resources means a right to their use; it may be claimed by the input of labor and materials as well as the maintenance and management of the resource. Strictly, therefore, there is no ownership of land as such, but only rights to stewardship. This is so because land and natural resources belong to gods, spirits, and ancestors. Land-use depends not only on the initiative of the occupants but also on the occupants relationship to spirits, ancestors and the gods (Cordillera Studies Program, 1983; Pawid, 1984).

During the 1970s, the Cordillera region was the site of plans for a huge hydroelectric and irrigation scheme called the Chico River Basin Development Project. The National Power Corporation (NPC) planned to build four dams along the Chico River which would have inundated 16 towns and villages and forced the evacuation of an estimated 85,000 people. The tribal residents of the area joined together in peace pacts to protest the dams because of the threats they posed to their livelihoods and ancestral lands.

One Kalinga chief, who led opposition to the proposed hydroelectric project and was later assassinated for his activities, said the following to a government engineer (Parpan-Pagusara, 1984):

You ask if we own the land. And mock us. "Where is your title?" When we query the meaning of your words you answer with taunting arrogance. "Where are the documents to prove that you own the land?" Title. Documents. Proof (of ownership). Such arrogance to speak of owning the land. When you shall be owned by it. How can you own that which will outlive you. Only the race owns the land because only the race lives forever.

To claim a place is the birthright of every man. The lowly animals claim their place, how much more man. Man is born to live. Apu Kabunian, lord of us all, gave us life and placed us in the world to live human lives. And where shall we obtain life? From the land. To work (the land) is an obligation, not merely a right. In tilling the land you possess it. And so land is a grace that

must be nurtured. To enrich it and make it fructify is the eternal exhortation of Apu Kabunian to all his children. Land is sacred. Land is beloved. From its womb springs our Kalinga life.

D. The Mindanao Tribal Groups and the Defense of Mt. Apo

Such a spiritual attitude toward land and natural resources is similarly strong among the Mindanao tribal groups. This is shown in the resistance of several ICCs to a state-proposed geothermal project to be set up on Mt. Apo in south-central Mindanao.

Mt. Apo, at 2,954 meters above sea level the highest mountain peak in the Philippines, is home to about seven ICCs: Manobo, Bagobo, Ata, Ubo, K'lagan, Tagabawa, and Tagakaolo, with an estimated population of around 460,000. It was proclaimed a forest reserve and national park in 1936 and is included in the 1982 U.N. List of National Parks and Equivalent Reserves, as well as in the 1984 ASEAN Declaration on Heritage, Parks and Reserves. It is also the Philippine Eagle Reservation Site.

In 1986, the Philippine National Oil Company (PNOC) started exploratory operations in the area for a geothermal project. For legal and technical reasons, this was opposed by the Department of Environment and Natural Resources (DENR). However, PNOC was granted an Environmental Compliance Certificate (ECC) by the Environmental Management Bureau (EMB) without DENR's clearance. With this ECC, PNOC continued with its operations. Perceiving a danger to their health and the environment, the ICCs around Mt. Apo organized themselves and with support groups from Mindanao, Metro Manila, and abroad, managed to forestall implementation of the project.

In April 1989, 21 datus or traditional chiefs representing 9 ICCs made a peace pact, to defend Mt. Apo jointly. Their declaration -- called the D'yandi Declaration of Principles -- in part read:

For us, the Lumad of Southern Mindanao, the land is our life; a loving gift of Magbavaya (The Creator) to our race. We will die to defend it, even to the last drop of our blood.

We, Datus (tribal chieftains) of the Bogobo, Arumanen Manobo, Teduray (Tiruray), Ubo, K'lagan, Kaulo, T'boli, B'laan, and other Lumad peoples of southern Mindanao, have assembled here at the Spottswood Methodist Center in Kidapawan, North Cotabato, this 13th day of April 1989, to discuss and analyze the aspirations of our people, to focus attention to problems threatening our sacred ancestral domain - Sandawa¹ - and above all, to pool efforts in improving

¹ Sandawa is the traditional name of Mt. Apo.

the condition and ensuring the future of our race.

Like other people, we believe in a creator - MAGBAVAYA. We believe our race came from the FYE'WE and FUBULAW (man and woman or Adam and Eve). The mountains, forests, fields, and rivers are the dwelling places of our ancestors' spirits. The b'nati tree, the first tree on earth, was planted in the ancestral burial grounds of our forebears; and our beliefs have taught us to forever respect, love, and remember all of them.

We, Lumad, believe that land is the beginning and the end of our life and our race. Magbavaya created land for our race to live on. No one can accept it except D'wata who guards our land for us. Our race owns the land as proven by our ancestors who from birth till death cultivated it. They who are now buried in this land of their birth. To us, it is a concrete proof of our ownership of the land, in much the same way as we are now nourishing and living on it. (Reprinted in: Philippines Natural Resources Law Journal, Volume 2, Number 2, n.d., pp. 26-27.)

The ICCs wanted a full stoppage of the project and vowed to protect Mt. Apo "to the last drop of their blood," in accordance with the blood compact. They continued to meet with various groups in Mindanao and in Metro Manila. Supporters of the ICCs based in Metro Manila organized themselves into a Task Force Sandawa (TFS).

In July 1990, PNOC conducted scoping sessions to meet technical requirements and respond to demands being raised by the indigenous and environmental intervenors. Some ICC representatives participated in the scoping sessions where they made clear their indigenous concept of land and land ownership and their decision not to allow PNOC to continue a project in violation of their right to ancestral domain. One indigenous chief said:

Nature cannot be equalled by any development which is man-made only, or that nature is even more sacred than man himself. That is why to the Lumad [indigenous people], it is better for nature to exist without man than for man to exist without nature. Nature is a complete "set" or package of necessary things the Lumad need in order to live.

We are not against development projects which can improve the country because we also want our country to be one of the developed countries of the whole world. But with a project that can destroy nature, especially in our sacred place, then we are willing to die there in order to defend it [Mt. Apo]. We will never permit its destruction. [Translation of a written presentation by Datu (chief) Birang Tomas Ito, during the Scoping Session for the Mt. Apo Geothermal Project of the Philippine National Oil Corporation, Department of Environment and Natural Resources, Environment Management Bureau (DENR-EMB), 18 July 1990.]

In January 1991, PNOC released a 10-volume Environmental Impact Statement (EIS) on the Mt. Apo Geothermal Project. The EMB has also submitted its final report on the EIS, recommending the "granting of an Environmental Clearance Certificate when a scheme to ensure the sharing of benefits with the affected communities, especially the Lumads (ICCs) and the upland dwellers is firmly in place." Meanwhile, the ICCs in the area are reported to be consolidating themselves and undertaking reforestation activities on the slopes of Mt. Apo.

E. The Ethnographic Evidence

The views and attitudes of ICCs who have already organized so as to assert their rights to ancestral lands bear striking resemblances to the findings of earlier studies conducted by anthropologists, both Filipinos and foreigners. In a survey of shifting cultivation and notions of landed property, the anthropologist-missionary Rudolf Rahmann (1963) observed that various practices in the making of swiddens involve religious rites. Environmental spirits needed to be propitiated to ensure abundant harvests. Permission to clear new fields had to be sought from the spirits and gods of the forests who own the land. Such practices were to be found among various groups throughout the country.

Among the Hanunoo of Mindoro, land could never be possessed, alienated, or controlled by any member or segment of Hanunoo society (Conklin, 1957). However, crops could be possessed, alienated and controlled.

Among the Manobo of Mindanao, one or more families could select, clear, cultivate, and use areas of the virgin forest every year. These families retained their right to the fruits of the land for as long as they occupied the area, and even after abandonment for as long as the crops continued to produce fruit. The same practice was found to hold true among other groups in Mindanao such as the Bagobo, Bukidnon, Tiruray, and Subanon as well as the Mangyan of Mindoro. Mention is made of the perpetual ownership by families of rice-fields among the peoples of the Cordilleras of Northern Luzon.

Earlier during this century, R.F. Barton -- a North American teacher based in the Cordillera -- conducted studies on the Kalinga and Ifugao. His study on the Kalinga showed nuanced attitudes toward different aspects of the environment, which have remained essentially unchanged to this day. Barton observed that forest and field animals, fish, and wild vegetation (including trees) were free for anyone to benefit from. So, too, were lands and water over which no individual had made ownership claims. But forests could be owned by powerful individuals to the disadvantage of the weak. Ownership rights were based on first use: land belonged to the first cultivator; pasture, to the first who grazes cattle on it; the spring near or inside a field, to whoever builds the first field. There were, however, rules governing water use. Fields might be inhabited by souls of ancestors or by the Supreme Deity. To ensure good crops, offerings of rice, wine and chicken had to be made. Contrary to present day practices, Barton pointed out that community ownership had not yet fully developed and that "increasing scarcity of tillable and forest lands may in the future initiate strict rules limiting private

appropriation and simultaneously a sense of community ownership" (Barton, 1949).

For the Ifugao (Barton, 1919), lands and articles of value that had been handed down from generation to generation could not be the property of any individual. Possession was more in the nature of trusteeship -- in trust for future generations rather than absolute ownership.

Forest lands are still communally owned by a group of kinsmen and their families. But if wood is scarce or if parts of the forest appear suitable for conversion into ricefields, forest lands may now be divided among families. The family woodlot is zealously protected as it provides various needed items such as building materials, fuelwood, herbal medicine, meat, etc. (Castro, 1985 and 1990). In turn, the protected woodlots help to stabilize the ecosystem.

Among the Kankana-ey of the Loo Valley, Benguet, the natural environment is both a source of raw materials that support human life and an abode of supernatural elements, including ancestral spirits (Fiagoy, 1984). Through appropriate rituals and technology, they maintain harmonious relationships with the spirits and the natural environment. Since the Kankana-ey extract energy from the land, they must replenish it by continually planting pine trees on the land.

The same interrelationships hold true among the Manobo of Agusan del Sur (Burton, 1985). To maintain harmony with both the spirit and natural worlds, appropriate rituals are performed, so that the spirits will take care of the natural world, which they own. Reciprocally, the Manobo must protect and use natural resources judiciously. If land and nature are not respected as gifts from Magbabaya, people will suffer. A Manobo chief of Agusan del Sur expressed this in the following way (Anonymous, 1990):

Once the earth was beautiful, there was abundant food and sickness was very rare. We lived happily and peacefully. If we didn't have meat, we just went to the forest and when we returned we brought wild pigs. If we wanted fish, we just went to the rivers and lakes and we could get what we wanted. Our life was very simple but we were contented with it.

... the abnormal rainy and wet seasons, successive typhoons and the presence of illness of every kind, are manifestations of the message that the earth is trying to communicate to the people ...

... the poverty and hunger we experience nowadays, is a punishment of Magbabaya because [humans have] not respected His gift of nature.

The land will no longer give an abundant harvest because of man's abuses. Plants are eaten by rats, animals, and insects because their food prepared by nature is gone. People and all the living creatures are no longer following the law of nature which was prepared by the creator since the beginning of the earth.

The Tagbanuwa of the Palawan Islands have been found to believe that Tagbanuwa society encompasses a part of the environment, such as plants, animals and other natural phenomena that affect daily life (Fox, 1952). Relationships with the immediate environment are personalized through ritual; these are not user-used relationships, which tend to lead to over-exploitation and, eventually, environmental degradation. The immediate natural environment around the fields and settlements is inhabited by deities, evil spirits, and one class of dead ancestors. Within this environment are sacred places which are not subjected to cultivation. Because the forests and mountains are abodes of environmental spirits and are therefore sacred and uncultivated, the general ecosystem is protected. The Tagbanuwa landscape is dotted with several sacred forests. Interspersed with these are small grasslands and old clearings. Such an arrangement makes forest regeneration relatively rapid.

Sacred places have a dynamic character. Departure of a local group from a sacred place or the death of a medicine man result in the loss of a sacred place's meaning. Another place may then become sacred should certain experiences in a new location be interpreted by the medicine man as investing it with sanctity. There is a constant interaction between the people and the environmental spirits in the course of everyday activities, such as swiddening, hunting, fishing and travel, when the appropriate rites are performed.

F. Ecosystem Peoples

The Agta of Isabela -- both east and west of the Sierra Madre, which runs along the east coast of Luzon -- continue to combine hunting-gathering and shifting cultivation (Rai, 1982). They are also referred to as "ecosystem people" in the sense that they live as part of the ecosystem rather than simply as its users or exploiters. They live well below the carrying capacity of the natural environment and thus they do not compete for resources. In effect, the egalitarian character of Agta society is facilitative and uncompetitive. As ecosystem people with very simple technology, they achieve ecosystem sustainability through various socio-cultural mechanisms:

1. camp movement to as much as 20 times a year as soon as resources are depleted;
2. extensive food-sharing which allocates food resources among members, thus preventing over-exploitation of resource-poor areas;
3. prohibition of fishing in certain rivers during the spawning and growing season of certain fish species; and,
4. harvesting cultivated food crops only as needed for domestic consumption.

Another ecosystem people are the Ayta of Mt. Pinatubo, Zambales, who, contrary to their popular perception as "forest dwellers", have practiced swiddening for at least a hundred

years (Brosius, 1981). As pointed out by an anthropologist who studied them in 1947-48, an Ayta "is an intrinsic part of his environment, and what is still more important, continually studies his surroundings" (Fox, 1952). When in doubt of the identify of a certain plant, an Ayta would taste the fruit, smell the leaves, break and examine the stem and the plant habitat after which they would conclude whether they knew the plant identity or not. The Ayta are always aware of the indirect relationship between plants, animals and insects and thus have a sophisticated idea of their ecosystem. Most Ayta men can easily "enumerate the specific or descriptive names of at least 450 plants, 75 birds, most of the snakes, fish, insects, and animals, and of even 20 species of ants." They can describe the "colors, habits, foods, calls, etc. of all the animal, insect and bird life known to [them]."

As shifting cultivators, the Tiruray of Cotabato, Mindanao, try to avoid permanent destruction of the natural forest by preventing it turning into grass land (Schlegel, 1979). They allow for a minimum of six or eight years fallow period, which they consider sufficient to restore soil fertility. They prefer virgin forest for swiddens as it is believed easier to clear than a second-growth forest. In clearing the forest for swidden, they make sure that certain useful fruit trees are protected. The community or neighborhood has the obligation of taking care of the land and its resources; no single individual can claim ownership over the land. Benefits must be shared with the community members (Anonymous, 1982). Moreover, the land is where their ancestors lived and are buried, and is therefore sacred (Philippine Episcopal Church Research Group, 1983). They are aware that repeated slashing and burning without sufficient fallow periods deflects succession into grassland, which is useful to the Tiruray only as a source for thatch roofing.

G. Conclusion

In sum, the terms "integral", "holistic", and "ecosystem" appear best to describe the attitudes of tribal Filipinos to land and natural resources. Concretely, this means a dynamic interrelationship between the indigenous occupants of a well-defined territory and the natural world, spirits, gods, ancestors and generations yet to come. Because of this view, no individual or group formally alienates, owns or controls the land and its resources. The land and its resources should only be used for the benefit of the community including future generations: people are only stewards and trustees.

Unfortunately, contrary attitudes, beliefs and practices brought about by Hispanic and North American colonialists, and reinforced by the fragmented and fragmenting worldview of Western-dominated industrialism, have altered and distorted the holistic worldview of indigenous peoples. But right now, indigenous peoples in the Philippines are organizing themselves to reclaim their birth right.

Indeed, the reminder of the World Commission on Environment and Development in its report, Our Common Future, bears repeating:

Tribal and indigenous peoples will need special attention as the forces of economic development disrupt their traditional lifestyles -- lifestyles that can offer modern societies many lessons ... [T]hey should be given a voice in formulating policies.

Addendum: National Land and Resources Law viz. Tribal Filipinos

The 1987 Philippine Constitution provides that the state recognize and promote the rights of ICCs within a framework of unity and development (Art. III, Sec. 22). The state shall also recognize, respect and protect the rights of ICCs to preserve and develop their cultures, traditions and institutions and shall consider these in the formulation of national plans (Art. XV, Sec. 17). Furthermore, the State shall protect the rights of ICCs to their ancestral lands to ensure their economic, social, and cultural well-being and may provide for the applicability of customary laws governing property rights in determining the ownership and extent of ancestral domain (Art. XII, Sec. 5).

The intent of these Constitutional provisions is to recognize the rights of ICCs as communities. As yet however, more than 4 years after the ratification of the Constitution, there has been no legislation to provide for the official documentation and registration of the ICCs' ancestral lands or domains. One explanation for this inaction is the dominance of a legal mind-set that refuses to acknowledge the validity of land and land ownership concepts other than those already entrenched in the national legal system; the latter in essence recognizes only private individual land ownership, both documented and demarcated.

Refusing to accept indigenous concepts of land and land ownership, government officials point to the Constitution's convenient endorsement of the Regalian Doctrine, by which all lands of the public domain, waters, minerals, coal, petroleum, forests or timber, wildlife, flora and fauna are owned by the State and that all resources, except agricultural lands, shall not be alienated (Art. XII, Sec. 2). They cite other laws all of which have their roots in Philippine colonial history and have been uncritically carried over into Philippine Constitutions, national laws and decrees.²

One decree that is particularly damaging to the interests of ICCs is Presidential Decree 705 (Revised Forestry Code) which was signed in 1975. It states:

No land of the public domain eighteen percent (18%) in slope or over shall be classified as alienable and disposable, nor any forest land fifty percent (50%) in slope or over as grazing land.

Lands eighteen percent (18%) in slope or over which have already been declared as alienable and disposable shall be reverted to the classification of

² For background on Spanish and Philippine land laws and their contemporary relevance to tribal Filipinos, see: Owen J. Lynch, Jr., "Land Rights, Land Laws and Land Usurpation: The Spanish Era (1565-1898)"; Philippine Law Journal, LXIII (1st Quarter), 1988, pp. 82-111; and, Owen J. Lynch, Jr. and Kirk Talbot, "Legal Responses to the Philippine Deforestation Crisis," Journal of International Law and Politics (New York University), Volume 20, Number 3, Spring 1988, pp. 679-713.

forest lands ... to form part of the forest reserves .. that when public interest so requires, steps shall be taken to expropriate, cancel defective titles, or reject public land application, or eject occupants thereof (Sec. 15).

Since the vast majority of the ICCs inhabit hilly regions of eighteen percent (18%) slope or over, this decree makes ICCs squatters on the lands they have occupied since time immemorial. Jurisprudence which could be used to support the struggle of ICCs for the recognition of their land rights is ignored, or worse, used against ICCs. For example, there is the 1909 case of Carino vs. Insular Government, authored by U.S. Supreme Court Justice Oliver Wendell Holmes, which states that:

When as far back as testimony or memory goes, the land has been held by individuals under a claim of private ownership, it will be presumed to have been held in the same way from before Spanish conquest, and never to have been public land.

Private land ownership is constitutionally protected; land held by individuals and, as subsequently required by other laws, properly documented with a paper title, becomes alienable and disposable according to the prevailing legal system. In a 1986 case (Director of Lands vs. Acme Plywood and Veneer, Inc.), a corporation bought some 481,390 square meters of land from two members of an ICC. Given the general poverty and powerlessness of ICCs, particularly the smaller and more dispersed groups, they are vulnerable to the divisive effects of private individual ownership. Without community support and sanctions, individual members can easily be deceived or forced to sell their individually-held lands. Or, in accordance with national laws, but in violation of customary laws, individual members may facilitate the alienation of parts of the ancestral domain by outsiders.

On the positive side, the DENR, which is in charge of land classification and land titling, has been trying to devise administrative remedies that might help to protect the rights of ICCs. Adhering to the Regalian Doctrine, but cognizant of the constitutional mandate to recognize the rights of ICCs, the DENR Secretary issued in 1989 Special Orders 31 and 31-A which created a Task Force to accept, identify, evaluate and delineate ancestral land claims in the Cordillera region. DENR also offers an Individual Stewardship Contract and a Community Stewardship Contract to ICCs for them to undertake agroforestry or social forestry activities. These contracts are lease agreements; they do not affirm the ownership of the land by the ICCs according to customary laws. Proponents of these tenurial instruments argue that they offer temporary protection pending the enactment of the required laws. A provision of the contract states that members of ICCs entering into contract with the DENR do not waive their rights to their ancestral land.

Finally, in Congress, two bills, one each from the House of Representatives and the Senate, are on file. These bills seek to create a Commission on Ancestral Domain whose task is to settle unequivocally the ancestral domain/land question. In her 1989 State of the Nation Address, President Corazon Aquino underscored, among other things, the need for Congress to

address the ancestral domain/land question as a matter of social justice. Congress has yet to act on this request. ICCs and their support groups continue to press for the recognition of their rights.

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ANNEX

Our Agenda for the Bilateral and Multilateral Funders of Amazon Development¹

**World Bank
Inter-American Development Bank
U.S. Agency for International Development
European Economic Community**

We, the Indigenous Peoples, have been an integral part of the Amazon Biosphere for millennia. We have used and cared for the resources of that biosphere with a great deal of respect, because it is our home, and because we know that our survival and that of our future generations depends on it. Our accumulated knowledge about the ecology of our home, our models for living with the peculiarities of the Amazon 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, not only for our peoples, but also for all of humanity.

A. What the COICA wants

1. The most effective defense of the Amazonian Biosphere is the recognition and defense of the territories of the region's Indigenous Peoples and the promotion of their models for living within that Biosphere and for managing its resources in a sustainable way. The international funders of Amazonian development should educate themselves about the Indigenous People's relationship with their environment, and formulate new concepts of Amazonian development together with new criteria for supporting Amazonian development projects which would be compatible with the Indigenous People's principles of respect and care for the world around them, as well as with their concern for the survival and well-being of their future generations.

2. The international funders must recognize the rights of Indigenous Peoples as these are being defined within the Working Group on Indigenous Populations, established by the UN Human Rights Commission. These rights should form the basis of the institution's policy towards the Indigenous Peoples and their territories, who live in those areas where the funder is supporting development work. The funders should consult directly with the organizations of the Indigenous Peoples throughout the process of establishing this policy and should distribute that policy widely among governments and the organizations of Indigenous Peoples.

¹ *The following statement is by the Coordinating Body for the Indigenous People's Organizations of the Amazon Basin (COICA). It is republished from the IWGIA Yearbook 1990 of the International Work Group for Indigenous Affairs (Copenhagen, 1991).*

3. There can be no development projects in indigenous areas without the informed consent of the Indigenous Peoples affected. The funders must make every effort, through field research conducted by personnel of the funding institution, to verify the existence of indigenous populations, or the possible negative impact on an indigenous population, in areas where they are considering the implementation of a project. If either is the case, the funder must openly recognize the existence of this population, or the negative impact on them, and then should establish as condition for further funding the project:

- that the government responsible for implementing the project also recognize the existence of the population and/or the negative impact;
- that the affected population be informed of the plans; and
- that the affected population consent to the implementation of the plans.

These conditions should be monitored by both the funder and the organization which represents the affected population.

4. If the indigenous population has given its informed consent to the implementation of a development project within its territory, the project must be designed in such a way that it respects the territories of the population as they define them, their economy and their social organization, according to the institutional policy as described in Point One. There should be special components of the project which lend support directly to the indigenous population for their own needs and for the development proposals which they may have. The organization which represents the affected population should participate in the design of the project.

5. The international funders should enter into a direct relation of collaboration and mutual respect with the organizations of Indigenous Peoples, through their representatives. This relation should establish the basis for:

- consultations on all aspects of projects implemented in areas with an indigenous population or which have an impact on an indigenous population;
- participation of representatives of Indigenous Peoples in the planning, implementation, and evaluation of projects;
- exchange of information of mutual interest on plans, projects, activities, and needs of both.

B. How the COICA proposes implementing this agenda

1. Each funding agency should establish written accords with the Coordinating Body at the international level, and with each member organization of the Coordinating Body at the national level. These written accords should specify the conditions and objectives of the relation based on collaboration and mutual respect.

2. The representative from the headquarters of the funder should meet with the representatives of the Coordinating Body at least once a year, in order to monitor the implementation of the accords and of the institution's policy on Indigenous Peoples. This meeting could take place at the headquarters of either the funder or of the Coordinating Body.

3. The resident representatives of the funder (country mission director, area representative, etc.) should meet periodically with the representatives of the member organizations of the Coordinating Body in order to make the necessary consultations, to exchange information, and to monitor the implementation of the accords.

4. In the event that projects be proposed for an area in which there are indications of the existence of an indigenous population, or if there is reason to suspect that the project may have an impact on an indigenous population, the Coordinating Body recommends establishing the following procedures.

- As a first step, the funder, through personnel hired by the funder, should verify in the field the existence of an indigenous population in the project area, and the possible impact of the proposed project on that population; during this verification process, the researcher should consult directly with the Coordinating Body and with the member organization within the country in question.
- If it is determined that the proposed project will affect an indigenous population, a Tripartite Commission should be formed with the representative of the funder, the government, and the Coordinating Body through its local representative (including a representative of the local organization which directly represents the affected population, if such an organization exists).
- This Tripartite Commission should have the following functions:
 - inform the affected population of the development plans and determine if that population consents to the Plans;
 - determine if the proposed project represents a threat to the indigenous population and make recommendations about how to proceed;

- determine what the priorities of the affected population are, and make recommendations about how to best meet the priority needs;
- design the project component for the indigenous population, participate in the overall design of the project, and monitor the implementation of the project;
- design and implement a permanent evaluation of the impact of the project on the indigenous population.

Indigenous people's alternatives for Amazonian development

An important task for the Coordinating Body is to present the international community the alternatives which we indigenous peoples offer to living with the Amazonian biosphere, caring for it and developing within it. This is one of our important contributions to a better life for humankind. The following represent, in general terms, Our Program for the Defense of the Amazonian Biosphere.

1. The best defense of the Amazonian Biosphere is the defense of the territories recognized as homeland by Indigenous Peoples, and the promotion of our models for living within that biosphere and for managing its resources. This implies:

- education for the national and international communities regarding the indigenous people's concept of the unity between people and territory, and regarding our models for managing and caring for our environment.
- work with national governments, environmental organizations, and international institutions which fund Amazon development to develop new concepts and models for occupying and using the Amazon Basin in keeping with our long-term perspective (future generations), our respect for the interdependence between human kind and our environments, and our need to improve the well-being of the entire community; further work with the same institutions to translate these new concepts into concrete programs for developing and caring for the Amazon Basin and its inhabitants.
- research on the natural resources and traditional crops used by indigenous peoples, on the traditional systems for utilizing and conserving resources, and on models for the extraction of renewable resources.

- evaluation and systematization of the development projects implemented by indigenous peoples which attempt to combine the demands of the market economy with a respect for indigenous principles of development.

2. The defense of the Amazon Biosphere/Indigenous territories must go hand in hand with the recognition of, and respect for the territorial, political, cultural, economic, and human rights of the Indigenous Peoples. This implies:

- continued participation and support for the U.N. process for establishing an international instrument recognizing the rights of Indigenous Peoples.
- education for the national and international communities regarding the rights of Indigenous Peoples.
- establishment of mechanisms at both the national and international level for defending the rights of Indigenous Peoples in cases of violations of, or conflicts over those rights.

3. The right of self-determination for indigenous peoples within their environment/territory is fundamental for guaranteeing the well-being of the Indigenous Population and of the Amazonian biosphere. This implies:

- respect for our autonomous forms of community, ethnic, and regional government.
- indigenous control over the economic activities within the indigenous territories, including the extraction of mineral reserves.
- respect for indigenous customary law and the indigenous norms for social control.

4. Concrete proposals for International Cooperation:

For many decades now, most of our people have been experimenting with ways to participate in the encroaching market economies of our respective countries, while trying to survive as peoples intimately linked to the Amazonian forest. We have done this despite the hostility shown us by the frontier society, and despite the fact that, within the context of the market economy, we are desperately poor. For these reasons, we have organized ourselves in new ways, and developed and managed a variety of small programs to improve our health, education, and economy. The following is a brief listing which suggests the kinds of programs which we are currently undertaking or wish to undertake. It is these small-scale, locally controlled initiatives which should be the cornerstone of future Amazonian development.

- Programs for territorial demarcation and defense

including research on territorial composition, land use patterns, soil and forest classifications; demarcation of territories; titling and registration of territories; training of para-legals, topographers; relocation of settlers and miners squatting on indigenous territories; recuperation of lands illegally taken; the establishment of complimentary forest reserves, wildlife reserves, national parks, and joint programs to manage them.

- Programs for resource management

including research on land use capabilities, soil quality, inventories of flora, fauna, and mineral reserves, indigenous management practices; training in research methodology; projects for managing forests through sustainable harvesting practices; projects for improving the productivity of rubber, Brazil nut, and other extractive activities; projects of recovering lands and resources devastated by conquest and colonization.

- Programs to strengthen material self-sufficiency

including research on traditional crops, foods gathered from the forest, farming practices, hunting and fishing technologies; projects for improving productivity, stability, and diversity of traditional farming system; projects to introduce or improve small animal husbandry; projects to manage food resources found in the forest; projects to replenish and manage flora for housing, clothing, and utensils.

- Programs for economic development

including projects for industrialization on a small scale of products extracted from the forest; projects to adapt traditional artisan products to market demands; establishment of community marketing channels; establishment of community-controlled transportation systems; projects to improve productivity of agriculture and animal husbandry where directed at the market.

- Programs for maintaining a healthy community

including research on traditional healing practices, traditional

medicines, health problems common to indigenous communities; projects to strengthen traditional health practices; projects to improve drinking water, nutrition, and sanitary conditions where deficient; community-controlled health systems including primary care, diagnostic services, and stores of basic medicines; education and training for health care personnel.

- Programs for bilingual and intercultural education

including research in the linguistics of Amazonian languages, on pedagogies relevant to our situations and cultures; training for indigenous teachers, linguists, and pedagogues; preparation of educational materials.

- Programs to defend our rights as peoples

including research on reported violations of indigenous peoples rights, on Indian customary law; training of indigenous lawyers and para-legals; recourse to top legal advise when necessary; participation in fora promoting the rights of indigenous peoples; campaigns to end slavery, captive communities, debt peonage, and forced labor among indigenous peoples; campaigns against forced removals or relocations of indigenous peoples.

- Programs for research and documentation

including the coordination and systematization of information relevant to the programs of indigenous peoples within their organization; establishment of libraries and research centers in the service of indigenous peoples and others who seek new models for Amazonian development.

- Programs for strengthening and communicating our voice

including systems which allow easy communication among indigenous communities and organizations; participation in local, regional, national, and international fora where decisions are made which affect our well-being; visits and exchange of experiences among indigenous communities, organizations, and programs.

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