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**THE POLITICAL ECOLOGY OF NATURE-BASED TOURISM IN CANAIMA
NATIONAL PARK, VENEZUELA AND THE CHANGING RESOURCE RELATION
OF THE PEMON-KAMARACOTO**

VOLUME I

By

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ABSTRACT

THE POLITICAL ECOLOGY OF NATURE-BASED TOURISM IN CANAIMA NATIONAL PARK, VENEZUELA AND THE CHANGING RESOURCE RELATION OF THE PEMON-KAMARACOTO

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Domingo A. Medina Dagert

Canaima National Park and its Gran Sabana ecosystem is experiencing significant environmental change. Forest depletion and savannization are the major environmental threats to the integrity of the park. This has significant consequences such as the deterioration of the hydroelectric potential of the Caroní basin, loss of biodiversity and the reduction in forest availability for a viable indigenous subsistence economy. The cultural ecological practices of shifting cultivation and the many uses of fire of the Pemon people who inhabit the parkland are at the center of the controversy. The present study seeks to understand how and why the Pemon are degrading the land on which they depend for their cultural sustainability. The thesis is explored that it is the different political, economic, social and cultural factors that are influencing and changing the Pemon environmental resource relations which in turn cause land degradation. Specifically the study concentrates on the socio-cultural and environmental impacts of ecotourism development focusing on the Kamaracoto people, a Pemon subgroup living in the Kamarata Valley in Canaima National Park, Venezuela. The study adopts a political ecology framework that is concerned with human-environment relations that result in environmental degradation. The study follows a macro-micro approach, applying multiple sources of evidence with triangulation including participant observation, primary census data, in-depth interviews, participatory research methods, spatial analysis, sampling of agriculture plots and analysis of archival documents. An environmental change

model is proposed illustrating the political ecology of tourism in the Kamarata Valley and showing the process of destabilization of the Kamaracoto agriculture system and its environmental consequences due to tourism. The study concludes that: (1) historical government indigenist and conservation policies, and economic forces have generated demographic changes and acculturation processes in the Pemon society. This has resulted in the instability of social/cultural factors in which the sustainability of the Pemon cultural ecology depend; (2) The Kamaracoto have been experiencing rapid population growth and environmental degradation. They have few economic development alternatives but to inevitably participate in tourism; (3) This participation, unplanned and without training, results in dependency relations with in-bound tour operators; (4) The comparative advantage of Canaima as a tourism resource, the international promotion of ecotourism as a development strategy, the embrace of ecotourism in the economic agenda of the Venezuelan government and the need of the Park Service to generate income, have created the conditions that facilitate the creation and expansion of ecotourism development opportunities within the park and other natural and cultural areas in Venezuela; (5) Ecotourism market integration has resulted in an increase of the Kamaracoto household income, stratification of their society and changes in the social and economic organization of their domestic unit with destabilizing consequences to their subsistence farming system; (6) If the trends of ecotourism development in the valley continue, further changes to the economy of the Kamaracoto will be observed generating further environmental degradation. Likewise more changes to the cultural makeup of the Kamaracoto will be observed as well as an increase dependence on the market. These trends, unless regulated, can have a negative “boomerang effect” to the tourism activities in the valley and to the sustainability of the Kamaracoto as an ethnic group.

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CHAPTER 1

INTRODUCTION

This thesis explores the environmental issues related to the development of nature-based tourism (ecotourism) in the context of protected areas inhabited by indigenous peoples.¹ Focusing on Canaima National Park in Venezuela, this study examines the political, environmental, social and economic processes that affect indigenous people's environmental resource relations and its consequences.

Canaima National Park in the Guayana region of Venezuela is a World Heritage Site representing an important natural and cultural area for the country and the world. The park has multiple values and interests for many stakeholders. These values and interests tend to overlap and are often in competition. This creates tension and, many times, confrontation between the different stakeholders.

Currently, the park is facing many threats to its environmental integrity. Forest depletion and savannization are the major environmental threats with significant environmental, economic and social consequences at all levels including the deterioration of the hydroelectric potential of the Caroní basin, the loss of biodiversity and the reduction in forest availability for a viable indigenous subsistence economy. This is a local tragedy in terms of the cultural continuity and survival of indigenous groups and a major national economic and conservation concern. Consequently, resource managers are under time-pressure to minimize the resource degradation of the Gran Sabana ecosystem and the Caroní basin.

Currently, there are no longitudinal studies of environmental change (i.e., remote sensing or historical ecology) that start with a baseline and control sites and monitor change that could tell us not only about the extent of the change but also provide an explanation of the different causes and their relative contribution. Nevertheless, over the years, natural and social science research in the area has pointed to many causes of environmental change. Those range from successional processes, climate change, natural fires, erosion and leaching processes to anthropogenic impacts such as population growth and density, indigenous land use practices, illegal mining, road expansions and development schemes (i.e., agriculture extension, electric power lines, mining and tourism) (e.g., Urbina, 1979; Rodriguez, 1981; Thomas, 1982; Urbina, 1982; Morales and Gorzula, 1986; Gorzula and Medina, 1986; Fölster, 1986; Hernandez, 1987; Schubert and Huber, 1989; Huber, 1990; Azuaje, 1991; Cabrera and Jaffé, 1991; Rull, 1991; Rull, 1992; Cuenca and Lovera, 1992; Romero, 1992; Ochoa, Molinar and Giner, 1993; Cousin, 1994; Gomez and Picón, 1994; Fölster and Dezzee, 1994; Huber and Zent, 1995; Fölster, 1995; Huber, 1995a; Huber, 1995b; Rodriguez and Sharpe, 1996b; Rosales, et.al 1997; Kingsbury, 1999).

Taken together, these studies suggest several aspects of the state of our knowledge regarding the degradation of Canaima's resource base. First, there is a very good understanding of the climate regime, geomorphology, biogeography, biodiversity and ecology of Canaima. As a result there are important inventories of plant and animal species, vegetation formations and soils. Likewise this work sheds light on the ecological processes underlying forest and savanna degradation which has led to research in ecology

¹ In this study the term "indigenous peoples" refers to those people who are considered native, endemic or original to a specific region or place (Stevens, 1997; Butler, 1996).

restoration and reforestation. Second, there is rather poor understanding of human-environment interactions. Such interactions involve both historical and current political and social processes that define the use of Canaima's resources and determine the future sustainability of the park. Studies in this area have provided some understanding of the ethnographic and cultural ecology of the indigenous groups in Canaima. Similarly, they have pointed to the historical political and social processes leading to cultural change, but have not directly addressed the indigenous peoples' changing environmental resource relations that result from cultural change or political economic forces.

Unfortunately, these studies do not clearly state the magnitude of the environmental problems they discuss and many point to multiple causes. The causes vary according to whether the environmental problem is related or compounded by activities such as shifting cultivation, mining, fires, logging, cattle ranching, road building, agriculture, tourism or other government development schemes. The causes are as diverse as the number of stakeholders. Moreover, they fail to distinguish between causes of the problem and its symptoms. These pitfalls limit the understanding of environmental issues in Canaima and the possibilities of finding solutions.

The Pemon native people that inhabit the parkland are at the center of the controversy and are blamed for many environmental degradation problems (i.e., savanna and forest fires, deforestation, and game and fisheries depletion). This blame is due in large part to their cultural ecological practices of shifting cultivation, to their many uses of fire, as well as to their population dynamic. Their perceived pervasive role regarding fires and savannization has led to negative attitudes by conservationists and resource managers towards them. The general understanding is that the Pemon agricultural

practices are inefficient, limited in productivity and a major factor in generating forest depletion and degradation. The Pemon are depicted as “quemones” (burners or pyromaniacs) and that they maintain a contradictory attitude towards their environment by intentionally degrading large areas of closed forests (Huber and Zent, 1995). Similar understanding and negative attitudes are reported elsewhere (Dove, 1983; Dove, 1992; Brookfield and Padoch, 1994). This attitude is compounded by the fact that Edelca – the State agency in charge of developing and maintaining the hydroelectric potential of the Caroní basin- concentrate its fire data collection in high conservation priority areas close to populated areas. This creates a bias leading many to erroneous conclusions regarding the Pemon cultural-ecological practices which is worsened by a poor understanding of the historical and political ecological factors that interact with the community’s culture.

Historically, this understanding of the Pemon cultural ecology has resulted in the creation of regulations, policies and programs by resource managers (i.e., Venezuelan Guayana Corporation (C.V.G.), Edelca, Inparques, National Guard) to minimize, change or eliminate the Pemon fire and subsistence farming practices. These programs have had mixed results. Examples include the unsustainable agriculture extension programs of the C.V.G to substitute shifting cultivation in some areas of the upper Caroní in the 70’s; the restriction of hunting and shifting cultivation in many areas of the park by National Guards up to the 90’s; the ongoing fire fighting programs of Edelca recruiting local Pemon men; and environmental education programs in Pemon bilingual schools developed by Edelca-C.V.G. These efforts have served more as palliatives than as solutions and some have generated more detrimental cultural and environmental effects.

When we consider the historical political and social processes that have impinged upon the Pemon it is clear that the solutions to forest degradation and savannization are not going to come from expensive fire fighting programs or environmental education alone. Many times fires and shifting cultivation practices that are detrimental to the sustainability of the forest are symptoms of changes in the Pemon culture.

Still in the literature there is no clear understanding of why the Pemon degrade their environment. But there are clues. Lizarralde (1992) points to the current process of socio-cultural change that affects these indigenous people (i.e., sedentariness, population growth, new technologies, and progressive adoption of a market economy) as mechanisms that are gradually modifying the human-ecosystem relationship in the national parks.

One of the least studied issues in Canaima is the development and expansion of nature-based tourism (ecotourism) and its impacts. Despite the fact that tourism development was one of the original objectives behind the creation of Canaima, it is not until now that the Venezuelan government, through its Corporation of Tourism (CORPOTURISMO) and the National Parks Service (INPARQUES) has regarded nature-based tourism as a national strategy for economic development.

The use of ecotourism as a potential solution to environmental and economic problems is not unique to Canaima. Indeed, in the last few years and given many political and economic reasons, ecotourism has been adopted in Venezuela as a promising conservation-development model and it is being aggressively promoted. This type of nature-base tourism stands in contrast with “environmentally unfriendly” industries such as timber extraction and mining, especially in the Gran Sabana region. Consequently, the

State in partnership with the private tourism sector and with the endorsement by many environmental NGO's is supporting ecotourism as a less invasive and less deteriorating alternative form of land use. However, little is known whether ecotourism, in practice, actually promotes environmental conservation whether is contributing to or mitigating against degradation processes in Canaima and whether it contributes to local and sustainable economic development of indigenous communities.

Thus, for resource managers the question is less one of whether environmental change and degradation is occurring in the unstable environment of the Gran Sabana than of how much environmental degradation can be attributable to indigenous peoples alone. Moreover, how much degradation can be attributable to political economic factors, development activities and to the political and institutional controllable factors that generate change?

The above presentation depicts a complex and dynamic situation where the problems are all interconnected. Consequently, a proper understanding can only emerge from a comprehensive investigation of the socio-economic, political and cultural context in which the park and its human communities function. Only through this approach can the political and institutional structural constraints be understood and addressed. Through this process the appropriate and legitimate policies, regulations and interventions can be established.

The purpose of the present study is to contribute to the understanding of how and why the Pemon are degrading their land which they depend upon for their cultural sustainability, and to explore the different political, economic, social and cultural factors that are influencing and changing the Pemon's environmental resource relations.

Moreover the purpose is to explore what is the role of ecotourism in generating or mitigating environmental change. This will provide an understanding of the relationship between nature-based tourism, environmental change and the Pemon's changing resource use relationships in the Kamarata Valley in Canaima National Park. These relationships are examined within the framework of political ecology that focuses on past and present human-environment interactions and examines these interactions in the context of wider political, social and economic spheres of relations.

Chapter one is organized as follows. First, it introduces the two main factors involved in the issues presented in this thesis. These factors are protected areas (PA's) as models for conserving biological diversity and unique natural and cultural resources, and nature-based tourism as a conservation-development model for PA's conservation. Second, it presents a brief review of the general issues related to tourism and the environment, focusing on the limitations of tourism to respond and resolve environmental issues related to its development. Here two main questions are discussed that address the nature of tourism and its impacts, and consequently are relevant to the framework adopted in this dissertation. These questions are 1) how and why tourism develops in a specific tourist destination. To address this issue, Butler's *tourist area development cycle model* is instrumental in providing some understanding of the evolution of tourism in a specific destination (from its inception as a destination, to the inevitable destruction of the tourism activity and the host area as a consequence of tourism itself); and 2) why tourism, despite its economic benefits, still generates inequalities in how the benefits and costs of the activity are distributed. Here, studies in the political economy of tourism

become relevant as they illustrate the power structure behind the promotion and development of tourism in a specific location.

Third, it introduces political ecology as a framework that unifies the two questions just laid out. Political ecology is discussed as an analytical framework used to study human-environment interactions and understand the causes of human generated environmental change and degradation. This is followed by a presentation of two case studies that exemplify how political ecology has been used to study tourism impacts. The chapter concludes with an overview of the purpose of the dissertation including a discussion of the application of political ecology to the present case study.

1.1 Protected Areas, Indigenous People and the Role of Tourism in Conservation

Designed to safeguard the most pristine ecosystems in the world, national parks and other protected areas (PA's) hold important natural and cultural resources that the tourism industry and governments depend on for their development agendas.

In the last century, the establishment and management of national parks and other types of PA's around the world have become central conservation strategies to preserve unique natural/cultural resources, important environmental services and biological diversity. By 1985, the International Union for the Conservation of Nature and Natural Resources (IUCN) had listed 3,500 sites distributed among 136 countries, covering 423 million ha (Dixon, 1990). In 1994, the World Resource Institute reported 8,619 protected areas in the world that covered 792,266,000 ha.², representing 5.9 percent of the worlds land area.³ This number of PA's still under-represents all the types of habitat that exist

² This represents an increase of approximately 87% between 1985 and 1994 in the number of hectares.

³ Fifty nine percent of these protected areas refer to nature reserve/wilderness areas, national parks and natural monuments.

on the earth (WRI, 1994) and it is considered insufficient to protect what remains of the world's genetic richness (WWF, 1992). To address this, the 1992 Fourth World Congress on National Parks and Protected Areas -held in Caracas, Venezuela- set the goal to double, in a decade, the number of PA's. However, these figures only reflect an increase in land area set aside for protection. They do not reflect the status of protection of these areas, the capacity of countries to manage them, nor the threats and conflicts that jeopardize their sustainability. That is, many PA's exist only on "paper"⁴, others are not large enough to contribute significantly to conservation (Ceballos-Lascuráin, 1996) and others are under-funded⁵, sometimes poorly managed, and have too few resources to achieve their conservation goals (Colchester, 1995). Indeed, often, government environmental agencies in charge of PA's compete for decreasing budget allocation and in many cases they lack the capacity to manage and monitor their extensive conservation system. At the same time, PA's are faced with frequently conflicting stakeholders' interests in their resources and pressure from development schemes. At the local level, many of these protected lands experience considerable pressure from the expanding scale of human activities outside and inside their boundaries (Wells and Brandon, 1992).

Conservationists now realize that the problem is not so much the need to create or expand new PA's but to insure strategies for the protection of the new, and of the already existing ones. They recognize the need to build political and public support for protected areas, and this can only be successful when the system can generate and distribute a range of direct public benefits as incentives for their protection (McNeely, 1995).

⁴ Areas geographically defined on maps, that are legally decreed as parks but do not receive support nor on-the ground protection.

⁵ Many budgets of national parks in developing countries compete with other public sector priorities and needs. Often these budgets are reduced or eliminated under structural adjustment programs in countries

Another obstacle to PA protection is that PA's are often created and managed as isolated ecological units mapped as detached islands. This has been shown to be an ineffective strategy because it ignores the wider social systems (cultural, political and economic) in which these areas are immersed (Freemuth, 1991; Whitesell, 1993; Colchester, 1995).

In the 1940's, the international conservation community encouraged the introduction and adoption by many Latin American countries of the North American National Park model declaring their national parks as areas of "public use"⁶. The application of this model has been challenged and severely criticized (Clay, 1985; Harmon, 1987; Hough, 1988; Martin and Lizarralde, 1992; Lizarralde, 1992) and its operationalization has been difficult for developing countries (Machlis and Tichnell, 1985), which have different political, physical, and socio-economic realities (Nepal & Weber, 1995).⁷

In fact, in many countries PA's have generated multiple problems that result from conflicting interests involving conservation policies, indigenous rights, land use and economic development policies, programs and projects. Many times these problems have serious environmental consequences. To find permanent solutions, the root social causes of the environmental problems need to be addressed.

1.1.2 Protected Areas and Indigenous People

servicing their external debt and trying to correct their trade imbalances (e.g., Costa Rica).

⁶ From the Agreement of the Protection of the Fauna Flora and Scenic Natural Beauties of the American countries in 1940.

⁷ Fifty two years after the adoption of the "park model", participants in the Workshop on People and Protected Areas at the Caracas Congress were dazed with the report by Amend and Amend (1992) that revealed that approximately 86 % of 184 South American national parks were inhabited by human populations which use resources permanently or temporarily (Kempf, 1993).

It is a fact in Latin America that indigenous people inhabit large extensions of land with important biodiversity values (Redford and Mansour, 1996). Also, it is a fact that the creations of areas to protect these lands are at many times imposed over local indigenous people traditional lands. This means that the creation of protected areas is commonly done without indigenous people participation or consultation thus creating many conflicts, and generating undesirable impacts both to the environment and the indigenous people (see Hough, 1988; Wells and Brandon, 1992; West and Brechin, 1991). Although, globally, many national parks and other protected areas have clearly recognized indigenous peoples' settlements and their right to resource access for subsistence (Stevens, 1997), still, in many Latin American countries, there are no clear policies or management strategies to deal with human settlements that live within or at the boundaries of National Parks.

The establishment of parks over rural indigenous communities has changed people's settlement patterns (Machlis and Tichnell, 1985), have restricted their access to traditionally used resources (Hough, 1988), and have not integrated them into the park concept and management. As a result, traditional uses of park resources have been criminalized, and have unintendedly threatened the ecosystem of the areas they are supposed to protect by promoting over-exploitation of resources, unsustainable agricultural practices, and poaching. Underlying these problems are issues of unresolved land tenure, ill-defined rights of ownership and new colonization (Anon, 1987; Place, 1988; West and Brechin, 1991; Amend and Amend, 1992). Moreover, indigenous populations have been affected by the Parks' restrictions imposed on them in their social organization, curtailing their ability to respond to external threats. These communities

living within parks receive little compensation for their loss of potential income from parks resources (Dixon and Sherman, 1990), or for their loss of traditional interaction with their environments and its cultural meaning (Lizarralde, 1992).

1.2 Ecotourism: Nature-based Tourism⁸

National Park systems establish a set of structural conditions that catalyze impacts on its cultural and natural resource base. National parks are tourism landscapes of rich natural and cultural resources that attract consumer-tourist visitation. As tourism landscapes, they offer "non-exclusive" and "rival" goods and are subject to two major problems in terms of managing common pool resources: control of overuse and lack of incentives for investment (Healy, 1994). In most National Parks, governments control property rights to manage the resources but they lack the necessary political initiatives and means to control overuse and resource degradation. Government control tends to permit open access as a service to the public in which the tourist and the tourism industry are allowed use of the resource without significant restriction by price or limited visitation levels (Lindberg, 1991).⁹ In an analysis of how these factors create impact, Lindberg (1991), following Butler's tourism cycle model, economic analysis and property rights theory, states that without cooperation among multiple users of park resources, nature tourism attractions can become "an open access resource in danger of overexploitation (from the society's total welfare point of view) as individual users try to profit at the expense of the group as a whole" (p.12). The "common pool problem" in national parks (as defined by Healy, 1994) can be exacerbated by tourism development

⁸ In this thesis, these two terms are used interchangeably.

⁹In many cases there are incentives for service suppliers and tourism operators such as tax breaks or low royalties for concessions.

that has a tendency to maximize its revenues by increasing levels of visitation and infrastructure, overusing the resource base to the point where its value is reduced or eliminated.¹⁰ It also exacerbates the problem because tourism tends to limit community participation and not share the long-term cost of the consequences of its development process.

The “common pool problem” is also reflected in local communities that lack the incentives to preserve and use the resources sustainably because their historical rights for using park resources are not recognized. Moreover, because local communities do not derive any benefits from the park including from tourism-related activities taking place within the park.

It is argued in many conservation publications that there is a need to integrate local populations within the establishment, management and monitoring of protected areas to reduce the pressure on the natural resources, and to create local support for the conservation goals for which these areas have been established (West and Brechin, 1991). This integration, it is proposed, includes the creation of economic development opportunities for local populations and the acquisition of a better understanding of the community’s cultural context, concerns, aspirations, and needs (McNeely, 1995). Whatever the strategies, however, they need to be evaluated in terms of their effectiveness. In other words, planners and politicians need to assess the extent to which effects on the local people and the environment are directly related to externally imposed strategy activities as opposed to other events and processes (Wells and Brandon, 1992). With this understanding, PA’s managers must look for approaches that can enhance

¹⁰The value is reduced to a point where the marginal benefit of each additional visit are less than the added cost of such visit because of ecological, congestion and cultural impacts (Lindberg, 1991) as well as

cooperation and support for PA's and reduce people-protected areas conflicts (Wells and Brandon, 1992; IUCN, 1993). Therefore, the issue at hand is, how to balance social and economic objectives with ecologically sound management in a way that it does not compromise the future ability of PA's to keep generating environmental services and benefits for the generations to come. In the case of indigenous people inhabiting protected areas, the struggle for many PA' managers concerns balancing conservation goals with the survival needs of local communities (Wells & Brandon, 1992), and their social and cultural integrity (Lizarralde, 1992).

In this decade, international environmental organizations, tourism organizations, development financial institutions, governments, NGO's and scholars have aggressively promoted ecotourism as a strategy or model for economic development and conservation for protected areas. Indeed, ecotourism has been sold both as an alternative to mass tourism and as an alternative form of land use of natural environments. But, what is Ecotourism? The notion of ecotourism is linked to multiple terms and there is a lack of consensus in its definition (Marajh and Meadows, 1992; Fridgen, 1992; Cater, 1994). However a broadly accepted definition of ecotourism is:

Environmentally responsible travel and visitation to relatively undisturbed natural areas, in order to enjoy, study and appreciate nature (and any accompanying cultural features - both past and present), that promotes conservation, has low visitor impact, and provides for beneficially active socio-economic involvement of local populations (Ceballos-Lascuráin, 1986, p.20).

Currently it is believed that ecotourism is the fastest growing sector of the tourism and hospitality industry and only until recently there is very little work challenging the model and what it claims. Despite, or maybe as a result of these successes, the tourism field has concentrated more on the management, marketing and finance of tourism

development than on studying how to go about making the industry sustainable. That is in a way that it continues to generate economic benefits while minimizing its negative impacts on host communities and its environmental resources.

Definitions like the one above are difficult to operationalize. At best, they point to notions such as “responsible travel”, “sustainability”, “social and environmental sensitivity” and “social equity” which are vague and, crucially, not a requirement for a financially viable ecotourism enterprise.¹¹ Recognizing the ethical implications and principles embedded in the definition and the need to make ecotourism a sound conservation/development strategy, many scholars, practitioners and NGO’s have developed guidelines for tour operators (The Ecotourism Society, 1993). Still others have developed ethical codes for the ecotourist (Colvin, 1992) and evaluation methods based on tourist surveys (Wood et.al, 1996) trying to operationalize principles of ecotourism (Wallace and Pierce, 1996; Wallace, 1996). These efforts have their merit. Yet, they have proven to be difficult to institutionalize and are insufficient to achieve the principles of ecotourism. This is so because they tend to overlook the structural nature of tourism and its political economic context that determines who benefits and who pays the cost of tourism development.

Ecotourism emerged in the late 80’s as an attempt to search for “alternative” forms of tourism¹² as a reaction to the negative impacts of “mass” tourism experiences (Lanfant and Graburn, 1992; Eadington, 1992).¹³ For (Butler, 1991) a change in the type

¹¹ In this study instead of determining a specific definition of ecotourism, the focus is on tour operators that define their operation as an ecotourism one. The concern is observing how ecotourism operators function in practice.

¹² "Forms of tourism that are consistent with natural, social and community values and which allow both host and guests to enjoy positive and worthwhile interaction and shared experiences" (Eadington and Smith, 1992, p.3).

¹³ Yet the role of tourism in environmental conservation was already underscored by Budowski (1976).

of tourism and the type of tourists are attempts to reduce the pressure of tourism. This is achieved by tapping into the potential of small and exclusive packaged tours to pristine destinations in order to attract a different type of tourist. This tourist is one that is more “culturally and environmentally” sympathetic of such areas, has a genuine interest for conservation, makes few demands on the resource (i.e., “high-quality” goods and services standards) and will spend more time and money.

In this view ecotourism is considered a conservation model because it proposes a change in the relationship of tourism and the environment in which the former should contribute to the enhancement and maintenance of the natural systems in which the industry depends.

For Eadington and Smith (1992) seeking alternative forms of tourism is not new. For them, the selection of specific “alternative” forms -such as ecotourism - has to do with the forces of its internationalization (e.g., market segmentation, environmentally responsible marketing and sustainable development policies). Ecotourism fits the increasing concern for “sustainable development” and for the preservation of cultural and natural attractions stressed by scientists, politicians, environmentalists and human rights groups at different scales. Particularly in Latin America, nature-based tourism is one of the economic activities that is being promoted from different spheres and sectors, and is being implemented as a new conservation paradigm since the early 90’s. All this seeks to do is to capitalize on the competitive advantage of the biodiversity and cultural resource base of protected areas systems without destroying them. Researchers describe such promotion as an economic activity that implies a non-consumptive use of nature and

consequently, a win-win development strategy for underdeveloped rural areas (Place, 1995).

By contrast, there are others who propose that that ecotourism is in reality an example of environmental opportunism (Cater, 1994) in which the tourism industry is “greening” their operation and marketing unique remote natural a cultural areas to attract tourist (Steele, 1993; Wight, 1993; Fridgen, 1993). Indeed it is not clear whether the “greening” of the tourism industry in many countries is motivated by the fashion of the moment, or triggered by the understanding that the preservation of what makes a tourism destination a “comparable advantage” is key to the sustainability of the industry in a particular destination.

The increase in the demand for ecotourism has been attributed to the macro-environment of trends both in conservation and in the tourism industry (Boo, 1994). In PA’s conservation, ecotourism results from the need to secure the economic potential of protected areas, creating economic alternatives for local communities, and generating economic incentives for the conservation of natural resources from other less valuable and more destructive land uses (Boo, 1994). In this way, ecotourism is considered a development model because it is endorsed as a solution to the problems of human pressure over PA’ resources.

Trends toward ecotourism operations in the travel industry are also attributed to the increasing purchasing power of potential tourists in industrial countries (Place, 1995) and to changes in general environmental values and awareness (Moore and Carter, 1993; Boo, 1994; Wight, 1996; Eagles, 1992; Palacio and MacCool, 1993). This is reflected in the change in tourist preference in traveling to more natural and less disturbed areas as a

result of increased concern in environmental issues and increased interest in “exotic” cultures (Ceballos-Lacuráin, 1996). Also it is reflected in the increase of tourist visitation to protected areas that tend to occur in peripheral and non-industrialized regions (Boo, 1990) and in the increase in the number of “ecotourism” tour operators, activities and travel packages to natural areas (Eagles & Wind, 1994; Higgins, 1996; Ingram & Durst, 1989; Lindberg, 1991). These changes have made pristine peripheral rural natural and cultural places more accessible through organized travel packages, integrating these destinations with the global economy (Zurick, 1992; Brohman, 1996; Place, 1995).

It has been noted that the demand for nature tourism is increasing around the world (Boo, 1990; Lindberg, 1991; Falcon, 1993; Higgins, 1996; Herliczek, 1996), which has served to justify many ecotourism projects worldwide. Nevertheless, such understanding is grossly unsubstantiated since a) there is no one common definition of ecotourist (Simon, 1996), b) there is a lack of reliable statistics in terms of “nature-tourist” visitation and their economic contribution, and c) the literature just tends to report statistics from “official” tourism organizations without questioning the validity and limitations of the data or asking if the data discern among different types of travelers. For instance, many of the data available and used in the reports of WWF (Boo, 1990) and the World Resource Institute are extrapolated from total tourist arrivals data, government’s reports on park visitation, personal communications with “outbound” tour operators and small non-sampling informal surveys in specific international airports and selected parks in Latin America. Similarly, Simon (1996) reports on the high variation of estimates of non-North American nature-oriented markets across different sources. He states that the Ecotourism Society (through oral communication) estimates that 40 to 60 % of

international tourist arrivals are to be nature oriented, but he does not indicate how the Society determines such parameters. In the case of US travelers, Simon reports on the 1992 US Travel Data Center Survey in which the largest percent of travelers (30%) have the intention to take an “ecotourism trip” compared to only 7% that actually took a trip. This type of data and other reports on trends of specific countries and on specific attractions in Costa Rica, Ecuador and Belize have helped in shaping the general perception of the demand for ecotourism.

It is believed that nature-tourism at the national level can generate substantial capital¹⁴ and that in many cases it represents an important activity of foreign exchange that can contribute to the service sector and balance of payment of many developing countries¹⁵. Such capital can be a justification for many countries to protect natural areas from other less beneficial use of those resources (Boo, 1990)¹⁶. It can supplement existing governmental conservation budgets¹⁷ (if earmarked for that purpose) and provide incentives for private sector conservation (Lindberg, Enriquez and Sproule, 1995).

Private tourism operators can allocate a percentage of tourist money for conservation

¹⁴Ecotourism is considered the fastest growing sector of the world tourism industry, which expanded from \$83.3 billion in 1979 (Waters, 1990) to approximately \$775 billion in 1993 (Eiden and Labate, 1993). Others are more conservative estimating that nature tourism’s share of total tourism earnings in developing countries falls between \$2 billion to \$12 billion a year (Lindberg, 1991; Poole, 1994; Laarman and Gregersen, 1996).

¹⁵Countries that have made a profit from nature tourism have parks that have a definitive comparative advantage or “scarcity rental”. Their attractions are so unique (e.g., gorillas, Galápagos Islands, Himalayas) that they do not have competition and the demand for these attractions are less likely to decrease (unless the attraction is negatively impacted) by fees structures because of the willingness to pay of foreign tourist. For these countries tourism is one of the most important if not the most important sector of their economy and are highly dependent on it.

¹⁶ This justification does not include the benefit of protecting for environmental services (e.g., watershed, absorption of CO₂ by forests) and biodiversity.

¹⁷As an example, reports on Ecuador’s Galápagos National Park state that the park generate enough revenues from direct tourism earnings and funds from conservation organization that the surplus help to manage and protect the rest of the parks and wildlife reserves in the country (Lindberg, 1991).

purposes such as support for national or local non-governmental organizations, purchase land for preservation, maintain the natural resource base where they operate (Kangas, et. al, 1995), conservation education and research.

At the local level, the entry cost for developing nature-tourism operations, when compared, to large-scale tourism is believed to be a low scale, slow paced kind of development with minimum investment requirements and with fewer leakage. On the other hand it could provide employment and income opportunities to remote areas to replace income lost from restrictions on allowable uses in protected area (Dixon and Sherman, 1990; Sayer, 1991; Ceballos-Lascuráin, 1996; Boo, 1991; Cater, 1993; Whelan, 1991). Funds could be allocated for alternative community and economic development programs (e.g., agroforestry in buffer zones, education, health services, low-interest loans, souvenirs, and arts and craft cooperatives) and in other cases in form of compensation, subsidies and indirect benefits. This is expected to help the park managers in obtaining local communities' collaboration in protecting the park if larger proportions of tourism revenues are recycled locally (McNeely et. al., 1992).

Alternatively, ecotourism seems to have the same potential as mass tourism to inevitably generate negative social, cultural, economic and environmental impacts (Butler, 1990; Valentine, 1992; McNeely, 1984; Eadington and Smith, 1992), and in many cases these effects are irreversible (Fridgen, 1992). Increasing local benefits from, and participation in, ecotourism development relies on hypothetical beliefs that still need to be observed in practice. Host countries and most important the host communities and the environment of ecotourism destinations have yet to receive the full benefit potential that ecotourism promises in terms of earmarking revenues to support conservation and

economic development. Ecotourism is not exempt from the structural issues found in any form of tourism. The impacts depend on who controls the development process and what are the environmental constraints and the political economic context in which tourism is being developed. Some of the criticisms that ecotourism has received include:

- Little of the money spent by tourists remains at or near the destination itself (Boo, 1990; Brechin, West, Harmon, & Kutay, 1991; Machlis & Tichnell, 1985; Bailey, 1991; Place, 1995; Wells & Brandon, 1992), resulting in significant economic leakage (Britton, 1982);
- Whatever is collected by National Parks from tourism activities tend to go to a general public funds instead to conservation efforts;
- Ecotourism systems that operate in parks are owned commonly by a few wealthy outsiders, while responsibility for care of resource is not well defined, falling commonly and disproportionally on impoverished local residents which lack funds and incentives for proper management (Cater, 1993; Place, 1995);
- Small communities that look into tourism for their economic development and diversification tend to depend on tourism flows which are seasonal and very sensitive to factors such as currency exchange, immigration restrictions, crowdedness, deterioration of destination attractions, political instability and change in market preferences (Cater, 1987; Smith, 1989; Wilkinson, 1989; Butler, 1990; Ceballos-Lascuráin, 1996; Meadows, 1993);
- There is no guarantee that the type of tourist that come are the “eco-tourist” type (Butler, 1991; Cater, 1993); and
- Communities are highly dependent on outside agencies for tourist contacts, promotion, supplies and amenities (Higgins, 1996; Medina, 1998).

Regarding environmental impact, few are the studies in ecotourism and specifically in Latin America that quantify ecological impacts. Most environmental discussions go around the issue of the ecological and social carrying capacity of ecotourism destinations. Accounts of environmental distress in the literature include deforestation (e.g., tree cutting for firewood in Sagarmatha, Nepal); loss of vegetation cover, soil compaction and erosion from hiking and expansion of secondary trails;

destruction of marine flora (coral reefs) and fauna (e.g., divers and powerboat in the Caribbean); litter; lack of sewage treatment and water pollution; distribution of wildlife (Klein, Humphrey and Perival, 1995), wildlife behavior, and loss of wildlife habitat (Knight and Gutzwiller, 1995); and over crowdedness and congestion (e.g., Galápagos Island in Ecuador and Monteverde Reserve in Costa Rica).

As it stands, the potential of ecotourism remains a promissory note. So far, very few studies if any in Latin America have been published which can present substantive support to the claims made by ecotourism advocates. The introduction of ecotourism to peripheral economies (remote rural areas), its development process, its role in conservation and its social, economic and environmental impacts have not been fully studied nor understood. They need to be explained and measured against the broader studies of tourism development models and concepts (Zurick, 1992). Therefore, there is a need to examine and monitor the extent to which ecotourism meets the needs of the host population, satisfy the demands of tourist and safeguard the natural environment (Cater, 1993).¹⁸ Some of the most pressing questions are: Is the current practice of ecotourism an effective option for conservation and local economic development in areas that are declared national parks? What are the forces pushing for the development of ecotourism worldwide? Raising Nash's (1989) concerns, what are the forces causing indigenous peoples to look for, agree to or allow for tourism development in their homeland? What are the impacts? Who benefits and pays the costs of ecotourism development? Obviously,

¹⁸Similar criteria's are proposed by Hummel (1993) to reach ecotourism objectives. First there has to be an "awareness of sustainability" of the natural resources of a destination site among all the stakeholders. Second, local people have to benefit and third, local tourism policy and management should be directed in a way that the development of destinations is directed at the satisfaction of tourists, locals and environmentalists.

research has to look into these issues and test emerging strategies directed towards the goals of the parks and equally important, the needs of the host communities.

1.3 The Political Ecology of Tourism: Analyzing the Tourism, Society and Environment Interface.

The environment, whether natural, cultural or both, plays a central role in the inception, development and sustainability of tourism in most tourist destinations. Unique cultural and natural environments, with distinctive landscapes and specific climate regimes constitute a great part of the image of many tourist destinations (Fridgen, 1987). These features serve as powerful attractions that influence tourist choice and behavioral patterns depending on the tourist needs, motivations and expectations. On the other hand, the environmental features of a place are important marketable goods for a profit driven tourism industry that is constantly looking for expanding opportunities for their multiple market segments. These resources represent the comparative advantage of many countries and communities, which want to develop tourism for their economic objectives.

Up until the 1970's the importance and dependence of tourism on the environment was hardly recognized in the tourism industry. It was not until studies in the tourism field began to highlight the negative environmental, social and economic impacts of mass tourism in the most visited areas of the world that the need was created to expand impact oriented studies to assess the real benefits and costs of tourism (Bryden, 1973; Van den Berghe, 1994; IUOTO, 1975; Turner and Ash, 1975; Hills and Lundgren, 1977; Farrel, 1987; Cohen, 1978; Mings, 1978a; De Kadt, 1979; Cater, 1987; Wilkinson, 1987). Since then, debates between scholars, practitioners, developers and government agencies have been dealing with the incompatibilities and ambiguities of tourism and the

environment. This includes developing ideas on how to go about reaching tourism sustainable development, responsible tourism and/or alternative forms of tourism.

The existing and increasing literature on environmental impacts of tourism provides extensive accounts and research that demonstrate that the tourism-environment relationship, can be symbiotic, ambivalent or result in significant detrimental effects on the environment (Cohen, 1978; Loukissas, 1978; Mathieson and Wall, 1982; Wilkinson, 1989; Smith and Jenner, 1989; Pearce, 1991; Pigram, 1992). As a result, environmental impact studies have concentrated on elucidating primary and secondary effects of tourism and recreation on vegetation cover, water and air quality, soil, geology, wildlife, human-made attractions and others. Based on these studies, the degree of impacts depend on many variables such as ecosystem resiliency and physical carrying capacity to absorb tourists (Hammit & Cole, 1987; Butler, 1992). These variables themselves depend on the intensity of site use including visitation levels, visitor behavior (types of tourists), length of stay, type and pattern of activities, nature and level of infrastructure development, the extent of areas in time and space, etc. (Hammit and Cole, 1987; Hendee, et. al 1990). Furthermore, environmental impacts linked to tourism are also attributed to faulty tourism planning and/or to the lack of monitoring of the rapid growth of the industry (Williams, 1992).

The solutions to many of the environmental impacts of tourism and recreation tend to come from natural resource management in the public sector and not from the tourism industry itself (Farrell, 1991). Some of these solutions include the establishment of resource management goals and strategies (management plans, and zoning); estimating physical and social carrying capacity of destinations; determining limits to acceptable

change; developing social and environmental impact assessment for planning and minimizing impacts of project development; developing visitor management strategies such as regulations and policies that control or try to influence behavioral change of visitors, or regulate access by pricing policies or closing seasonally the visitation to recreational or tourist sites. However, many of these solutions have their own problems and tend to be more value judgments and technical solutions (Wall, 1996) –as in direct resource use strategies- than structural ones. Many of these solutions are rarely implemented worldwide, they tend to overlook indirect environmental consequences, many depend on public funding that compete with other management plans and many have resulted in limited success when applied in different contexts.

The park, recreation and tourism field finds itself with limited theoretical and conceptual guidance to address the unresolved environmental issues and other social problems linked to the expansion of tourism worldwide and specifically to remote sensitive cultural and natural areas. Researchers have noted that approaches to tourism studies lacking theory, mainly concentrate on planning, analyzing growth in tourist flows and receipts, spatial analyses of tourism and recreation activities and impact assessment of the industry (Britton, 1991; Mowforth and Munt, 1998).

If tourism is conceived not only as an economic activity but also as a dynamic system that falls within the realm of human-environment interactions then the tourism field must play a greater role not only in understanding such interactions but also in being part of the interdisciplinary research in the social sciences (e.g., Geography, Anthropology, Political Science) that are concerned with addressing and resolving environmental problems. To achieve this, the tourism field has to integrate and use in its

understanding of the tourism phenomena, environmental approaches and social theory as frameworks to address these environmental problems.

The following is a discussion of one model that seeks to describe how tourism evolves overtime and at what point during its evolution negative socio-economic and environmental impacts occur. This constitutes one of the first steps towards understanding the nature of the tourism industry in general and of ecotourism in particular.

1.3.1 The Tourism Development Life Cycle

An important question in the tourism field is how tourism develops in a specific locality. Butler's (1980) tourist area cycle model addresses this question by theorizing on the dynamics of tourism evolution overtime (Ioannides, 1995). Since its derivation, Butler's model has generated significant debate and has been used in many ways as a basis to: a) describe the tourism performance of a particular destination (Wilkinson, 1987; 1995); b) describe changes in host communities attitudes toward tourism (Ryan, 1991); c) examine the relation between the model and carrying capacity for management and policy applications (Martin and Uysal, 1990); d) develop a comparative history of tourism of different destinations to explain their current differential performances (Weaver, 1990; Douglas, 1995) and; e) develop tourist typologies according to the different evolutionary stages of tourism (Cohen, 1972; Plog, 1973).

Butler's model applies the product's life cycle concept to tourism development. It describes the specific phases in the evolutionary sequence of tourist destinations, and is based on the assumption that tourist destinations are dynamic, and that they evolve and change overtime. Figure 1.1 below illustrates the model.

The model suggests that tourist destinations move through transitional phases that progress unidirectionally. Butler (1989) believes that even though there is a controversy on the unidirectionality of his model there is enough evidence to support the consistency of the evolutionary nature of tourist destinations as described by his model. He notes that "rates of growth and change may vary widely, but the final result will be the same in almost all cases" (1980, p.6).

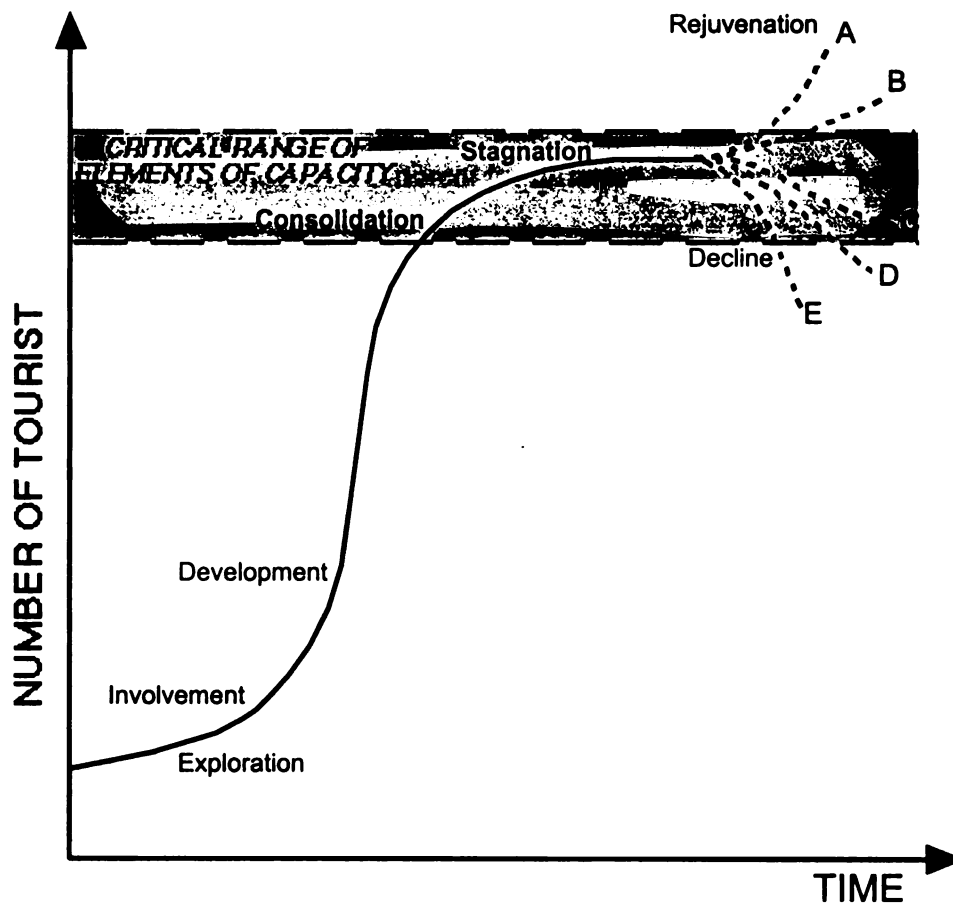


Figure 1.1 Butler's tourist area cycle of evolution.

The model starts by describing an initial stage of exploration, passing through stages of increasing visitation and growth of tourism related services and infrastructure,

up to the consolidation of mass tourism and well developed stages that can reach and surpass local physical and social carrying capacities with negative social, economic and environmental consequences. The stages that the tourist destination goes through are exploration, involvement, development, consolidation, stagnation, decline and rejuvenation (for a detail explanation of the stages see Butler, 1980).

Number of tourist and time represent the y and x -axes of the cycle respectively. The principal of the cycle is as follows: as the time and the number of tourist increases, a general reduction in overall quality and attractiveness of the destination is experienced, after the physical and social carrying capacities of the area are reached. The shape of the curve of the cycle is expected to be different for different areas depending on variables such as rate of tourist's visitation, rate of infrastructure and services development, accessibility of the area, state policies and regulations and other competing tourist areas in the region.

The importance of Butler's model is not so much the description of the tourism stages but the kinds of predictions it makes about the behavior of the industry. In this respect, the model predicts that once you "plant the seed of tourism" -and its development is left alone- the destruction of the tourist destination is inevitable with multiple negative environmental, social and economic impacts. In his description of the stages of the model, Butler mentions multiple factors and elements of the industry (i.e., tourist, tour operators, local community, tourism policies, the role of the state, etc.) that could explain why tourism develops in the way he describes it. However he does not elaborate on them, nor does he try to address the factors in a systematic way. Indeed he fails to explain the relationship between the different elements of the industry and the wider context of

development processes, as well as, the distribution of power and power structures that interplay in the evolution of tourism (Mowforth and Munt, 1998). Moreover, Butler's model invokes Malthusian ideas regarding overpopulation and environmental issues. From the model, the only solution to the inevitability of the destruction that tourism brings is to limit the number of tourists, and implement regulations and policies to control growth and expansion.

As can be seen then, Butler's model is able to create stages of tourism development according to field observations but it still does not explain the reasons behind the tendency of tourism to grow in the way the model indicates. As it turns out, these reasons have been addressed in part within the political economy of tourism.

1.3.2 The Political Economy of Tourism

Broadly speaking, political economy is concerned with ideologies and economic theory, production structures and practices as they relate to models, strategies and/or policies for market driven economic development. Likewise, political economy is concerned with understanding not only patterns of development but also in analyzing critically inequalities within economic systems and localities. To the extent that tourism is viewed as an alternative for economic development, political economy represents an appropriate framework in which to analyze the dynamics and impacts of the industry. This serves to test the development model within the tourist destination where it operates.

Few are the studies that have applied theories of economic development to tourism (Pearce, 1991). Bryden (1973), in his study of tourism in the Caribbean was one of the first scholars to point out that tourism can take many forms and that the impacts that result from such development depend on the context in which the development

occurs. Studies in the political economy of tourism (i.e., Geshekte, 1978; Aspelin, 1978; Britton, 1982, 1989; Cater, 1987; Lea, 1988; Nash, 1989; Wilkinson, 1989; Lanfant and Graburn, 1992; Lanfant, 1995; Poirer and Wright, 1993; Pleumarom, 1994; Brohman, 1996; Gray, 1997; Nicholson-Lord, 1997) have come from different disciplines and have concentrated mainly on the:

- Role of tourism as a strategy for economic development;
- Structure of international tourism;
- Economic, political and institutional push factors behind the promotion and development of tourism in third world countries; and
- Impacts of tourism in a wide context.

One of the first and most influential studies that analyzed tourism from a political economy perspective is found in geography in the work of Britton (1982, 1989). Britton points out that the tourism literature that focuses on development has a common deficiency. That is, they tend to be detached from the historical and political processes that determine development. The literature that Britton refers to deals with the impacts of tourism that he describes as “narrowly define” cost-benefit analyses, “imprecise comments” on social-cultural impacts, or technical studies such as forecasting tourist flows, planning hotel location or determining the multiplier effect of tourism expenditures.

In his analysis Britton’s goal is instead to place tourism within the development dialogue by using theories of political economy which concentrate on issues of poverty and inequality between and within developed and developing countries. His concern is focused on the ambiguity of tourism development that, on one hand generates

unquestionable benefits in many third world countries but on the other hand it sustains “class and regional inequalities, economic problems and social tensions” (p.332). The solution to this concern, according to Britton is found in the understanding of the fundamental mechanisms intrinsic both to the tourist industry and to the economy of third world countries. Such understanding is based on two central questions: how the industry manifests itself, and who benefits from tourism development? Britton considers these questions as the factors essential for building a model of the interconnection of international tourism in third world tourist destinations. Furthermore, he believes that this understanding should take into account the economic and political structures within third world countries, as well as, the historical dynamics, which are responsible for shaping the common features of these economies. In regard to tourism, these analyses involve an understanding of the organization and commercial structure of the tourism industry and specifically the “power and dominance of certain activity components and ownership groups” (within the industry) (p. 333).

The main premise used by Britton is that many third world countries have had a history of colonial or imperialist domination with different levels of exposure. This history, he believes, can explain current common structural distortions in the economic and social organization of these countries. This was achieved by having core colonialist and then capitalist economies interconnected with peripheral countries through imposed forms of production, social organization and trading mechanisms aimed to meet the economic and political interests of the colonial and imperialist powers. The impact of uneven power relations set by colonial and imperialist institutions, Britton maintains,

explain the difference in economic power and successful industrialization between the countries.

This led Britton to adopt dependency theory as the central framework to explain the dynamics and growing inequalities that result from tourism development, in this case, in the particular context of South Pacific islands (i.e., Tonga, Fiji and Cook).¹⁹ Britton defined dependency as:

A process of historical conditioning which alters the internal functioning of economic and social subsystems within an underdeveloped country. This conditioning causes the simultaneous disintegration of an indigenous economy and its reorientation to serve the needs of exogenous markets (internal-disarticulation). (p.333-334).

The internal conditioning of the underdeveloped country is defined as the specific role of that country in the economic system and the way in which the underdeveloped country is “articulated” in relation to the core capitalist countries. In this form of economic production, relations, companies, institutions and governments in the core countries, as well as, local elite in the peripheral country have control over commodity production, trade, technology and capital flow. This relation perpetuated overtime and combined with distortions in the local economy (e.g., selective allocation of resources, stunted accumulation of productive surplus, oppression of labor, high leakage) limits the ability of such economy to meet its basic needs (i.e., food, shelter, social welfare and employment for the public majority). By the same token, that relation benefits mostly powerful commercial and political groups in the periphery and foreign interests which are

¹⁹ Dependency theories emerged as a reaction against unilineal theories of economic evolution (such as proposed by Rostow (1960) and others theories such as modernization theories that view development as a process of transferring capital and technology from First World to the Third World in order to close the gap between them. These views had a hard time explaining the continuing widening gap within Third World countries and between developed and developing countries (Lewellen, 1995).

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in a better position to influence State policies and development projects and profit from such development (Britton, 1982). The same mechanisms of articulation can be applied, according to Britton, to the tourism industry, which in the development theory framework has its origin in the core countries.

Britton studies the composition of the tourism industry within the Islands of Tonga, Fiji and Cook by sectors, ownership, and the colonial history of each country. He concludes that metropolitan tourism capital (core-periphery relationship) is the single most important factor in determining the organization and characteristics of tourism in an underdeveloped country. This is explained by the commercial power that foreign enterprises in the international tourist industry have in controlling the flow of tourists and allowing locals only to participate either through wage labor employment or in small, petty retail and artisan enterprises.

What Britton demonstrates is that different levels of foreign ownership of sectors within the tourism industry of countries will generate different benefits. More foreign ownership means more tourism receipts but at the same time, it means larger leakage. Less foreign ownership by contrast means, less tourism receipts and but also less leakage.

The major contribution of Britton's work is the structural model of third world tourism that captures the international and national organization of tourism and explains the unequal distribution of tourist expenditures among the components of the industry (Britton, 1982). Key to his model is the observation that commercial power and ownership of the means of production (tourist, transportation, hotels, etc.) leads to the greater benefits (tourism expenditures) to the entity that has such ownership, independent of the attractions that a destination may have. Britton's solution to the inequality he

observed requires government intervention where the organization of the industry and the distribution of power are considered in order to warrant a greater distribution of the benefits from the industry. In other words, to develop alternative forms of tourism (different from conventional -mass- tourism) that support local ownership, generates job opportunities and reduces leakage in the economy (Britton and Clarke, 1987).

In this way, Britton provides the beginning of an explanation of the factors behind the behavior of tourism (growth and impacts), which Butler's model lacks. He does this by showing the linkages and structure of power between the international organization of the tourism industry and the commercial and political elite's at the local destination, which explain the differential economic impacts of tourism.

Other studies concerned with the political economy of tourism have been less theory driven but nevertheless have contributed in illustrating central issues that are common in the political economic examination of tourism. These studies have pointed out the many factors that have expanded tourism worldwide which have: a) shaped the nature of growth of tourism in a specific destination, b) defined the role of tourism in the development process of a destination area, and c) determined the differential impacts of tourism. The following are important factors commonly linked to the political economy analysis of tourism found in the literature:

- a) *The role of Nation-States in promoting tourism development.* Studies in this area examine the role of the nation-states in using tourism to accomplish national goals, in shaping the nature of tourism development and the process of tourism policy formulation. In this regard, the role of the State is highly linked to international relations and competition, political stability and intra-national issues of tourism development (Aspelin, 1978; Gesheker, 1978; Lanfant, 1980, 1995; Lanfant and Graburn, 1992; Poirer and Wright, 1993; Hall, 1994, 1998; Gray, 1997).

- b) *The role of international financial institutions* (e.g., World Bank, UN agencies and regional development banks) *and international conservation organizations* (e.g., WWF, IUCN and the World Resource Institute) *and their linkages in promoting and supporting tourism development and other alternative forms*. Studies in this area have focused on the ideologies, agendas and mechanisms through which these institutions together with national governments have systematically designed the political and economic conditions and demands for developing forms of tourism (Lanfant and Graburn, 1992; Pleumarom, 1994). This has contributed to the establishment of tourism as a global phenomenon with its related critical and irreversible social and environmental costs.
- c) *The structure of third world countries' economy and development needs* (within capitalist and socialist economies). Analysis of these factors includes the historical and current internal economic conditions of third world countries that push or justify tourism development agendas (Cater, 1987; Wilkinson, 1989; Pleumaron, 1994; Poirer and Wright, 1993; Gray, 1997). For instance, tourism represents for some economies the only export sector opportunity to generate foreign exchange. For other countries faced with unstable world prices of their commodity export or with limiting quotas on the goods exported to first world countries, tourism represents a diversification of their economies. Yet, for other countries tourism may serve as a strategy to deal with foreign debt burden or deficit in their balance of payments.
- d) *Power structures*. Studies that have examined this factor address the power relations between stakeholders, and access to power in the process of decision making in tourism development, including institutional and policy arrangements for tourism (Britton, 1989; Nash, 1989; Wilkinson, 1989; Hall, 1994, 1998; Gray, 1997). In addition, it refers to how tourism is used to achieve political agendas.
- e) *Organization and operation of tourism from the international level to the linkages with lower levels of tourism structures*. Studies that have analyzed these factors address not only how the industry is structured and how it is articulated and functions at different spatial scales but also how the industry is impacted by current global concerns of the environment and sustainable development (Britton, 1989; Lea, 1988; Lanfant, 1980; Lanfant and Graburn, 1992; Pleumaron, 1994; Hall, 1998).
- f) *The ideological, economic and conservation development models that support tourism development agendas within third world countries* (e.g., export led development, sustainable development, biodiversity protection, structural adjustment programs, neoliberal theories of development, privatization schemes, foreign investment, liberalization policies and free trade arrangements). Analyses of these factors focus on how are they reflected in national economic and tourism development plans, policies and strategies and

in political discourses and processes of decision making in tourism development (Poirer and Wright, 1993; Pleumarom, 1994; Brohman, 1996; Gray, 1997; Hall, 1994, 1998).

- g) *Impacts of tourism.* These refer to the sociopolitical, economic, cultural and environmental ramifications resulting from tourism development concretely within capitalist settings of capital accumulation, competition and free trade which tend to be less responsive to social concerns. These ramifications include issues of unequal distribution of the benefits and costs of tourism; indigenous rights and commodization of indigenous culture for tourism marketing; loss of local control over development; and the establishment of dependency relations with tourism (Britton, 1982, 1989; Cater, 1987; Nash, 1989; Wilkinson, 1989; Poirer and Wright, 1993; Pleumarom, 1994; Brohman, 1996; Hall, 1994, 1998; Nicholson-Lord, 1997).

As we can see, while Britton provides for a big picture regarding the political economy of tourism, other studies have further specified the elements and processes involved in the manifestation, operation and behavior of the industry and its consequences. The importance of the studies in the political economy of tourism is that they have mapped a wide range of linkages between different actors and economic and political interests in the development of the industry. Furthermore, they have pointed to the direct and indirect social and environmental consequences that result from the action of those linkages. However, the analytical tools that the political economy of tourism provides do not explicitly address issues of environmental change and degradation resulting from tourism. Similarly, they do not address the local socio-economic dynamics of human-environment interactions, which may or may not be related to tourism activities. Nevertheless, they are instrumental in the process of obtaining a proper understanding of the development of tourism and its consequences in a specific location.

Very few studies if any have attempted to integrate in an analytical framework the determinants that shape the nature of tourism in a particular place and then establish the linkages between the multiple forces found at different levels of analysis (local, regional,

national and international). This conceptual and methodological challenge, outlined by Hall (1994), is deemed necessary if there is to be a comprehensive understanding of the politics behind the industry.

As it turns out, this same challenge is found in the political ecological analyses that seek to understand and search solutions for environmental issues that result from human-environment interactions. It is to these points that political ecology speaks. Applying political ecology to tourism provides an analytical framework to understand the social causes and consequences of tourism-related environmental problems within a specific context. This places tourism into the broader debate of human-environment interactions, as they relate to environmental issues that are human induced.

What follows is a discussion of how political ecology allows the integration of the concerns regarding how tourism evolves overtime, why it evolves in the way it does, and what are the consequences of such evolution in a particular context. Furthermore it enables us to explore issues of power relations, issues of uneven capital accumulation and adverse environmental change linked to tourism development in specific cases.

1.4 Political Ecology: Understanding Environmental Change

Political ecology is a theoretical framework that focuses on human-environment interactions that result in environmental change. Proliferating since the 1980's and expanding in the 1990's, and mainly in the fields of anthropology and geography, political ecology studies are characterized by the application of interdisciplinary approaches that raise central questions about environmental change that result from

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human-environment interactions²⁰ within the political economic context in which these interactions occur (Milton, 1995; Painter, 1995; Whitesell, 1993; Zimmerer, 1994). This theoretical framework has been used in many settings (mostly in so-called “third world” countries) and applied to many environmental and social issues such as: soil erosion (Blaikie, 1985; Blaikie and Brookfield, 1987; Black, 1989; HersHKovitz, 1993), deforestation, land use change and destruction (Schmink and Wood, 1987; Stonich, 1993; Jarosz; Moran, 1993), fisheries overexploitation (Chapman, 1989), breakdown of local food production (Grossman, 1993), wildlife and biodiversity conservation (Neumann, 1992; Akama, 1993; Brown, 1998), land use conflict (Gezon, 1997), evaluation of amazon extractive reserves (Whitesell, 1993), over-harvesting of specific plant species in Mexico (Burwell, 1995), dredge-mining in Africa (Preston-Whyte, 1995); gender issues regarding environmental knowledge and protection in Kenya (Rocheleau, 1995); human right violations in Malawi linked to tourism development (Derman and Ferguson, 1995) and change of resource relation and tourism impacts in the Virgin Islands and Honduras (Johnston, 1987; Stonich, 1998).

Political ecology emerged during a time of politicization of the environment in 60’s and 70’s (Peet and Watts, 1993; Blaikie, 1994). Nonetheless the term has been attributed to Wolf’s (1972) work which brought to fore the theoretical imperative to analyze local land use under a political economic context that links the local situation with wider social, political and economic issues (Peet and Watts, 1993, 1996; Durham,

²⁰ The use of political ecology in this study is merely as an analytical framework, differing from other uses. For instance the term has been used to point to the social and political implications of the programs and strategies put forward by environmentalists and ecologists through social movements to address environmental crises (Roussopoulos, 1993). Also the term has been used in ecological Marxist theoretical formulation of environmental degradation, which analyze the process in which economic growth under capitalist development depends on the reproduction of “productive conditions” (e.g., natural resource and

1995; Stonich, 1995). This proposal notwithstanding, the analytical tools and suitable methodologies to guide research for such new conceptualization of human-environment relations were not put forth until the 80's (Durham, 1995; Stonich, 1995).

In the field of anthropology, political ecology oriented studies emerged from a rejection of environmental deterministic views of human environment relations, unilinear evolution theories and from critiques of cultural ecology and cultural materialism (Campbell and Olson, 1991; Durham, 1995; Peet and Watts, 1993; Milton, 1995). It also emerged from a rejection of simplistic Malthusian, world systems and dependency theoretical understanding of environmental degradation (Stonich, 1993; Durham, 1995; Campbell and Olson, 1991; Moore, 1993). Since the 80's anthropologists have been moving towards conceptualizations that view human-environment relations as an interactive process, focusing on the dynamics between human productive systems and the environmental resource base (Painter, 1995). The nature of such productive systems (how and for what purpose they are exploited) are viewed as dependent on the social determination of what defines critical natural resources at a particular time and place, the distribution of access to those resources, and the nature of the social relations and institutional arrangements mediating that access (who controls access to critical resources, through what mechanisms) (Blaikie, 1994; Painter, 1995). This has had implications in the understanding of specific resource management practices within the limitations of a specific physical environment and its social and environmental consequences (who benefits and who pays the cost from differential access to critical resources). Seeking an even wider perspective, anthropologists have incorporated

labor) which are treated as commodities and exploited in ways that threaten their sustainability and generate social and economic problems (Villanueva, 1995; Stonich, 1993; Leff, 1993).

historical context in their analysis to understand how a local situation came to be, and political economy as an analytical component to many cultural ecological studies that used to focus on human-environment relations and adaptations isolated from the wider political, social and economic context (Johnston, 1987; Bennett, 1996; Campbell and Olson, 1991). These conceptualizations are reflected in the increasing interest among anthropologist in explaining the relation between small-scale events and processes, on the one hand, and broader scale events and processes (micro-macro level linkages and analysis) on the other (DeWalt and Pelto, 1985).

In geography, political ecology has its roots in the evolving ecological concepts in human geography. These concepts moved from basic formulations of human adaptations (i.e., human ecology) to the role of ethnicity, social and political power in influencing human behavior and consequently its relation with the environment (Zimmerer, 1994). In human geography a better understanding of human-environment interactions has resulted from a) recognizing historical processes as a contingent factor shaping current environmental change; b) considering broader political, social and economic contexts that impinge upon local decisions in regard to resource utilization; and c) considering differential human capacities and relative power to respond to environmental change (Zimmerer, 1994; Bryant, 1992).²¹

1.4.1 The Main Features of Political Ecology

Although there is great variety in their treatment, the following elements are central features in many political ecological studies:

²¹ For a more comprehensive review of paradigms and theories in the social sciences applied to study and explain human induced environmental change and degradation see Stonich, 1993, Whitesell, 1993, Zimmerer, 1994 and Milton, 1995.

- Concern with human induced environmental change and degradation focusing in assessing its causes and consequences. Political ecological studies attempt systemic analyses of the interactions between environmental systems and local production systems. In this way try to understand why certain forms of land uses occur and why in many cases the land is exploited in ways that imperil its sustainability, and consequently the subsistence of the land-users in the long term.
- Human-environment relations are understood as a two-way interaction process between social and environmental systems ranging from the local to the regional, national and global level.
- Temporal and spatial levels of analysis of environmental change are emphasized with the recognition that such change results from historical and social processes.
- The identification of systemic roots of environmental degradation borne out of the interaction between power relations at the local and macro levels. Systemic roots of environmental degradation are found in the political economic context in which human-environment interactions take place in a specific locality. Political economy provides a structural perspective underscoring the causal relationships between a local production systems (modes of production and the associated social relations, social dynamics and class structure) and the larger national and international economy, political structures and structures of decision-making, particularly as they influence decisions about resources use, the structure of ownership and rights to use and control resources (HersHKovitz, 1993, p.330).
- Concern in understanding specific environmental problems, and in reaching contextualized solutions to those problems,²² rather than building theoretical formulations regarding society-environment relations or theories of environmental degradation. These analyses can lead to policy-oriented recommendations for structural change to procure both environmental protection and social equity.

1.4.2 Field Work on the Political Ecology of Tourism

To my knowledge, there are only two studies that have used political ecology to study tourism impacts: Johnston (1987) and Stonich (1998). Johnston (1987) has been rarely cited, and Stonich (1998) is a recent publication that promises to advance the applicability of political ecology approaches to tourism.

²² There have been attempts to build models that illustrate the mechanisms that generate environmental deterioration. For an example Durham (1995) synthesizes in a model the major findings of studies regarding structural causes of environmental change in Latin America.

Anthropologist Barbara Johnston (1987) is a pioneer in applying a political ecology approach to tourism (tourism as development). The formulation of her model is different from the most common work in political ecology in that it characterizes political ecology as a framework rooted in cultural ecology. It integrates a political economy and systems approach to the analysis of social and environmental problems which are seen to be interactive and occurring within a context of competition over and/or unequal access to critical resources (Johnston, 1987). Her view of the framework is oriented by an ideological critique of the conflicting and seldom considered costs of development, questioning who gains in the process and what are the social/environmental costs. In defining her conceptual framework, Johnston reviews, criticizes and underlines the limitations of neoclassical economic theories of modernization that have guided tourism development strategies and the “eco-development” models of tourism. Neoclassical economics assesses the performance of tourism development based on cost-benefit analyses of direct and relatively quantifiable variables. However, this assessment overlooks the historical and political processes that determine development processes (citing de Kadt). In terms of the political economy of tourism, Johnston analyses the ways that tourism replicates existing social and economic conditions of dependency and underdevelopment, by linking local issues with the global capitalist system. Although political economic studies position tourism in a broader historical and political-economic context and link the industry with other forms of development, it suffers from the same limitations of the previous models. That is, the models address significant issues but are limited and rarely if ever integrate cultural consideration and less quantifiable impacts of tourism in the analyses. Key to solve this problem is the concept of “resource relations”

defined as those relations between people that revolve around issues of differing values, uses, and levels of access and control over critical resources. Critical resources are understood as "anything tangible (such as water, food, etc.) or intangible (knowledge) that is defined by a group as being an essential part of peoples lives" (p.15). It is through studying the political economic and cultural contexts, Johnston argues that one is able to recognize how people define, value, use and determine their levels of access and control over resources. Thus, the questions that guide this approach are how these relations change over time, and what are the political economic, social and environmental constraints, which influence change of these relations. Johnston's summarizes her framework as one that:

Looks at both external political economic relations and the internal social, environmental and cultural constraints. I place these micro/macro levels dynamics into a historical framework, which allows sufficient analytical depth to explore both social environmental consequences of tourism development, and which links social, cultural and environmental problems to a common development context (p.8).

Three case studies in the US Virgin Islands render support to this approach. The first case is a rural community study that addresses historical changes in land resource relations. The second case is a fisheries resource study looking at conflict between artisan fisherman over access and use rights of fishery resources; and the last case is a tourism resort development study analyzing the political actions adopted by locals to stop the development process. All the cases are linked to the tourism development context in the island. Johnston systematically reveals the impacts of tourism through her model observed through demographic changes, changes in resource values and use, changes in resources access and resource control. Throughout, it stresses the many social tensions and conflicts that result in uneven distribution of benefits and costs of tourism

development. Her concept of resource relations underscores the role of cultural variables in influencing political economic power relationships.

A more recent investigation into the political ecology of tourism is the work of anthropologist Susan Stonich (1998).²³ She studies, over a period of three years, the relationship between tourism development, water and environmental health in the Bay Island of Roatan in Honduras, a tourism hot spot, north from the mainland. Stonich concentrates on the various stakeholders involved in the tourism industry, their relative power in regard to control over water resources and the differential impacts of water quality and environmental health issues on the different social groups (i.e., Ladino immigrants, Afro-Antillean residents, tourists). The approach combines a multiplicity of qualitative and quantitative methods²⁴ to link the elements of her model in a hierarchical systemic structure from the international level forces, stepping down to the state role at the national level and then to more specific unit of analysis (i.e., community and households).

The model bases macro-micro levels of analysis on economic development policies and promotion of international tourism in Central America. It focuses on multinational tourism agreements in Central America and the key role of International development donor (i.e., World Bank, IDB, UN, and USAID) in supporting tourism initiatives in the region. These include collaborative efforts between international donors, NGOs, national

²³ Stonich has used the approach in other contexts to study environmental degradation linked to issues of agriculture export-led growth and the impoverishment of rural peasant in Honduras.

²⁴ Some of the methods include a census of three communities (i.e., Sandy Bay, West End and Flowers Bay), in-depth ethnography (life history interviews), semistructured surveys of men and women heads of households, attitudes toward tourism, tourist surveys, tourism business surveys, water quality studies and analysis of medical records and anthropometric studies.

governments and private investors; promoting tourism in international trade policies; and creating conditions for international and national investors such as economic incentives.

Another element of Stonich's approach is the role of the Honduran Government in promoting international tourism as a national strategy since the 80's, in order to capitalize on attractions such as Mayan archeological sites, beaches, colonial history and the coral reef of the Bay Islands. Following patterns observed elsewhere, the study reveals that the creation of tourism zones intensified when neoliberal economic policies were adopted since 1990 to promote "non-traditional exports" which were followed in the sector of tourism by policies that established strong economic incentives to attract foreign investment.

The focus of Stonich's study is on water as an important resource not only for tourism but also for the life and health of residents and tourists. It concludes that the transformation in the island, the socio-economic problems, water contamination and the human cost of poor environmental health is attributed to the actions and behavior of many stakeholders. However, it is the Honduras Government (with its fiscal incentives that encourages leakage and does not promote backward linkages) and the Bay Island elite's who have played a major role in accelerating an unregulated and uncontrolled tourism development. Subsequently, they have generated many spin-off effects with more local entrepreneur activities, small private foreign investments and new large-scale multinational hotel investments. Her policy recommendation centers on a systemic integrative policy approach to ensure development that is equitable and environmentally responsible. Collaboration among all relevant stakeholders with specific roles, from the Government, tourism businesses, tourist and local people is key in such policy

approaches in order to reduce the effects of fiscal incentives, reinforce existing laws and regulations, and minimize the impacts of the industry.

Stonich's study thus illustrates the multiple social causes of environmental deterioration in a specific context and shows also a wide range of methodological challenges to establish such cause-effect relations in a demanding analytical framework such as political ecology.

1.4.3 Critical Summary of Political Ecology

Political ecology does not go without major criticisms. Many scholars have pointed out that its broad agenda and not so clearly defined theoretical formulation and coherence that need analytical refinement to reduce plurality in its explanation of environmental change (Bryant, 1992; Peet and Watts, 1996). Likewise, political ecology needs to resolve the epistemological issues of trying to integrate social and natural sciences (Blaikie, 1994) and overcome many methodological challenges and the lack of clarity to establish cause-effect relationships at different temporal and spatial levels of analysis (Durham, 1995; Painter, 1995; Peet and Watts, 1996). Other scholars have underscored the tendency or bias of political ecology to only explain environmental issues in the third world or rural, peasant poor areas without regard to issues in first world countries or urban areas (Peet and Watts, 1996; Bryant, 1992). Most importantly, is the concern among researchers (Basset, 1988; Grossman, 1993; Whitesell, 1993) of political ecology's limitation in generating universal generalizations given its emphasis on specific contextual social and environmental factors; and its limited capacity so far in pointing to solutions to the many environmental problems it addresses (Bryant, 1992).

Although there is still a long way to go in developing a coherent theoretical architecture in political ecology, the approach allows for systematically analyzing environmental problems, and it is here where its strength resides. Cumulative studies in political ecology that thoroughly treat its elements and refine its methodological tools can lead to developing solid theoretical guidelines based on the common emerging patterns observed across environmental degradation problems.

Consequently, and despite the criticisms, political ecology is a powerful tool to systematically discern and map out the intricate and complex human-environment interaction in a particular locality. In this regard it helps in analyzing environmental problems and can help in unifying different socially constructed views of such problems in order to search for solutions that are environmentally responsive and socially desirable. In the case of tourism, political ecology provides an analytical frame to understand the nature of tourism (tourism business environment) and its impact in specific contexts guiding the search for sustainable tourism practices (business-development-conservation objectives) that primarily protects the environment and the host community.

1.5 Purpose of the Study

As mentioned, the purpose of this study is to understand how and why are the Pemon degrading their land and what is the role of ecotourism development in generating or mitigating environmental degradation taking as a case study the Pemon-Kamaracoto in the Kamarata Valley in Canaima National Park. The answer to these questions will provide an understanding of the relationship between nature-based tourism, environmental change and the Pemon changing resource use relationships. These relationships are examined within the framework of political ecology. The study

addresses local environmental issues as they relate to the social and cultural impacts of ecotourism. The case focuses on ecotourism development as it operates in a specific locality including its linkages with wider political, social and economic influences.

This study defines political ecology of tourism as the study of tourism-related causes and consequences of environmental change and degradation. In this view tourism development is understood both as a process and as a state. The former refers to the way in which tourism behaves overtime and the latter focuses on tourism as a means for development or reaching some end state or condition (Pearce, 1991). The development process depends on many variables (determinants of tourism demand and supply) but specifically on the structure of the business. This requires observing and identifying the tourism system structure and its historical context of development as it refers to the arrangement and actions of the different components or actors in the industry as they articulate with a specific local destination (Britton, 1989; Nash, 1992).

In this study, the environment in Canaima is conceived as a “resource and service enabler” as it is perceived and defined by multiple stakeholders. This is referred to as a “politicized environment” in which environmental issues must be studied without isolating them from the historical and current political and economic processes within which they are generated or catalyzed. This includes national and international agendas as they relate to economic development, conservation and indigenist policies and programs that impinge on the local human-environment interactions in Canaima. Studies within this context seek to determine whether an ecotourism system is achieving its conservation and development goals. The context sets a structural and political dimension

that is hard to modify and that perpetuates the existing relations between parks, local residents and tourism operators.

The multiple resources of Canaima are viewed in this study as highly contested by multiple interests and actors (i.e., State agencies, tourism operators, indigenous people, mining companies, etc.), which interact through the interplay of uneven power relations at different scales (local, regional, national and international). Such interplay of powers is central in the political ecological analysis. Power defines who controls and who has access to specific resources of the park, as well as, determining the differential benefits and costs of the resource use, environmental change and degradation. This study adopts Bryant's inclusive notion of power which speaks to three interconnected questions: what are the various ways and forms in which one actor seeks to exert control over the environment of other actors; how do power relations manifest themselves in terms of the physical environment; and, why are weaker actors able to resist their more powerful counterparts? (Bryant, 1996, p.39).

At the local level, this study looks at the "land manager" represented by the indigenous peoples. They are, according to Blaikie and Brookfield (1987), the proximate causal agents of environmental change. In this regard, the study focuses on the human geography of the indigenous peoples in the park and on their resource relation and resource management arrangements (cultural –ecological practices in terms of modes of production) expressed through their subsistence economy (based on shifting cultivation systems - *conucos*) and social structure. The study concentrates mostly on the instability of the local shifting cultivation systems (*conucos*) as the central environmental problem, although other environmental issues linked to tourism are addressed. Such instability is

seen as a gradual process with implications to forest degradation threatening the conservation of the park and the livelihood of the local indigenous population.²⁵ This study thus adopts Johnston's (1987) concept of resource relation,²⁶ to analyze the change of these relations overtime and their linkage to the political, economic, social and environmental constraints which influence such change and explore whether these changes contribute to environmental degradation.

This study recognizes that the environment and environmental issues are socially constructed and therefore different stakeholders can have different views of what constitutes environmental problems. The environmental problems addressed in this study are assessed from the local perspective, that is, from the local people's understanding and perception of their environment and the causes and consequences of environmental change.

In studying the different actors within a political ecology of tourism, the role of the state, local communities initiatives and entrepreneurs, and the activities of tour operators (in-bound and out bound), airlines, hotels and other actors (that articulate vertically and horizontally at different scales), shape the nature of tourism development in a specific destination and the type of impacts related to the kind of development. This forms what Jafari (1989) calls the "tourism business culture." The nature and role of entrepreneurs within the tourism industry is a neglected topic in the literature and is part

²⁵ The instability of shifting cultivation is a type of environmental change that has the characteristics of what Bryant (1996) calls an everyday dimension of environmental change. This means that every day physical changes result from day to day human practices which eventually impacts upon such practices. The rate of impacts of the physical changes is slow but progressive, and may only be perceived in the long run.

²⁶ Relations between people which revolve around issues of differing values, uses and levels of access and control over critical resources which are understood as "anything tangible (such as water, food, etc) or intangible(knowledge) that is defined by a group as being essential part of peoples lives" (p.15).

of the debate related to the economic, socio-cultural and environmental impacts of tourism (Shaw and Williams, 1998). Tourism entrepreneurs operate as brokers directly or indirectly within the host community and between host and guest (Jafari, 1989). Therefore, whether entrepreneurs are local or non-locals, whether they represent local interests or private initiatives and their relative level of organization, power and association within the business culture are important factors. This raises important questions about ownership, control over development and access to tourism resources and who benefits and who pays the costs from tourism development (Shaw & Williams, 1998). A primary consideration in this study is how power relations between the tour operators in the park and the local indigenous communities influence how ecotourism is being developed within the structure of the tourism business culture.

At the macro level, this study concentrates in the role of the state as an environmental manager and steward of environmental resources (Blaikie, 1994). The State is not only a key actor in managing the PA's, and promoting and regulating tourism in the park but also structuring and implementing economic development and indigenist policies. One of the problems is the often-overlapping role of the multiple state agencies that manages Canaima's resources and their differential importance and capacity to manage such resources. The State role is fundamental in understanding the conflict in the park over access to the park resources and environmental change.

This study follows Whitesell's (1993) notion that political ecology seeks to reach contextualized conclusions that can speak to both the causes of, and possible solutions to human induced environmental degradation. In this respect, such conclusions are expected, according to Whitesell, to orient a normative search for policies directed to

conservation with social equity. To this end, this thesis proposes a model of the political ecology of nature-based tourism that provides an understanding of the process of environmental change in the Kamarata Valley linked to tourism development. The findings of the study and the model are generalizable to the context of the whole Gran Sabana region and similar areas in the Guiana shield. It is expected that the model can guide the formulation of policies as well as local community development efforts too address the environmental issues that are threatening the sustainability of the park and the Pemon people.

1.6 Structure of the Dissertation

This dissertation is organized as follows. Chapter 2 presents the research methods. This includes a justification of the case study approach; the site selected for the case study and the procedures followed for the fieldwork. Here the methodological challenges involved in the studies of environmental degradation from the political ecological perspective are also discussed. Chapter 3 provides a background of the protected area system of Venezuela, its institutional and legal structure as a context to understand the impacts of tourism in the Kamarata Valley. Background information is presented regarding indigenous population in protected areas and Venezuela's indigenist policies that define the relation between the State and indigenous people. Subsequently a description of the region that comprises Canaima National Park is presented. This includes the bio-geographical characteristics of the park resources, and an overview of the multiple use values of the park. The chapter ends by discussing environmental problems and management constraints faced by the park.

Chapters 4 and 5 present the findings of the case study. Chapter 4 introduces the environmental and social aspects of the study area. It presents the physical aspects of the Kamarata Valley within the park and the human geography of the Pemon -Kamaracoto. Here a brief history of the Pemon society is reviewed up to the present, including an overview of the political, social and economic factors that have influenced their culture and resource base. This section includes a discussion of the Kamaracoto's environmental resource relations (cultural ecology) through subsistence activities and other ethnographic aspects including their social structure specifically as it relates to the organization of the domestic unit and their political system. The chapter ends with the presentation and discussion of the census data providing the demographic and socio-economic characteristics of the inhabitants of the Kamarata Valley.

Chapter 5 presents the political economy of nature-based tourism and its impacts in the Kamarata Valley. This section includes an historical overview and an analysis of the role of nature-based tourism in the region and other social processes associated with environmental problems. This analysis is preceded by a synthesis of the current political economy of the tourism sector in Venezuela. Here, are outlined the emergence of ecotourism in the political discourse and the push factors and power relations of the stakeholders in the industry guiding the agenda. Chapter 6 provides a discussion of the research findings in the form of a model. The model synthesizes the causes of environmental change (i.e., forest depletion and savannization) in the Kamarata Valley that are linked to tourism based on the data gathered in this dissertation complemented with data collected elsewhere. The model isolates the effect of tourism and links the different scales of analysis by showing the mechanism by which the political economic of

tourism in the Kamarata Valley impinges upon the changing cultural-ecological relations of the Pemon-Kamaracoto. These factors are dynamic and are considered within a historical context, social and institutional relations and the structure of the tourism system in the valley. In this manner, the model aims at providing a comprehensive understanding of the political, social, cultural and environmental issues in Canaima National that can contribute to policy formulation in the benefit of the park's resources and the indigenous communities.

CHAPTER 2

METHODS AND DATA

2.1 The Case Study as a Methodology in this Research

This study is conceived under a qualitative research paradigm because it does not start with a theory or set of hypothesis to test or verify through statistical inferences. Instead, the study is in line with the inductive process of research in which theory may result from the categories and patterns that emerge from the data collection and analysis steps of the research (Creswell, 1994).

This study adopts a case study research approach, which is designed to study comprehensively a contemporary phenomenon within its contextual conditions (Patton, 1990; Yin, 1994). Case studies commonly apply multiple quantitative and qualitative methods to gather multiple evidence and interpretations. This allows for triangulation to address any bias or errors inherent to particular methods or data sources and helps establishing validity of the results by seeking convergence of results or replication of findings through the different methods (Creswell, 1994; Emerson, 1988; Brewer and Hunter, 1989; Stynes, 1995).

This case study however is a variation from the classical case study method as defined by Yin (1994) because the data collection and analysis are not guided by prior theoretical propositions. Instead, the research presented here is guided by an analytical framework that seeks itself to generate a theoretical proposition in relation to the phenomenon under study grounded on the findings and evidence of the case.

2.2 The Study Area

The research site of this study is the Kamarata Valley within the Canaima National Park (Figure 2.0.1). Canaima National Park was created in 1962 and was declared a World Heritage Site by UNESCO in 1993. As part of the Venezuelan Guayana, Canaima contains an incredible unique ecological diversity, due to its natural history, its geomorphologic formations and altitudinal variations, soil properties, and different climatic regimes. Given this uniqueness, and other ecological, cultural and natural resources, Canaima holds a wide range of values (e.g., watershed protection, ecological processes, biodiversity, subsistence and cultural resources for indigenous communities, tourism, mining, education and research, non consumptive values, etc.). Many of these values are intangible, and tend to be contested, creating conflict between stakeholders given the many political, social and economic interests vested on the park resources. As a contextual background, chapter three provides a more detail description of Canaima, plus subsequent chapters address the conflicting issues endangering the park resources.

The Kamarata Valley is located in the west sector of the park (currently without a management plan) specifically in the northwest region.²⁷ This zone is located in a quadrant between the coordinates 5° 54' north latitude and -62° 24' west longitude, by 5° 24' north latitude and -62° 12' west longitude.

²⁷The closest major city to this area is Ciudad Bolivar, 125 miles away.

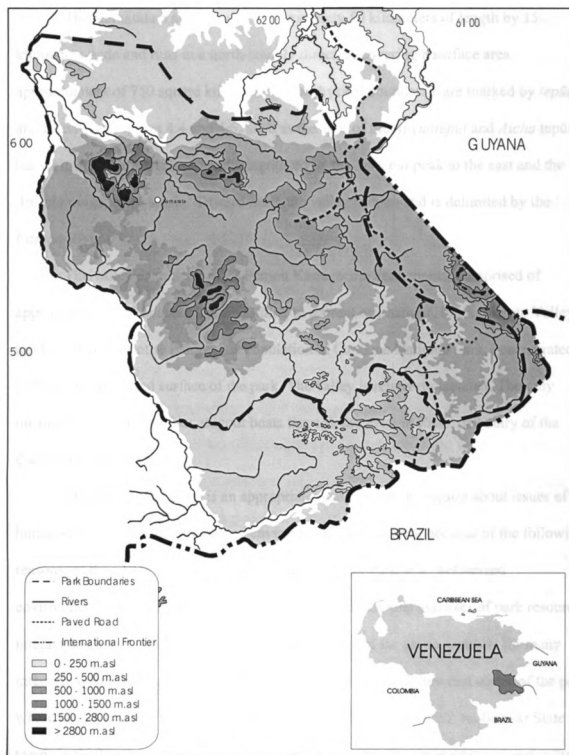


Figure 2.0.1 Canaima National Park

The Kamarata Valley covers approximately 50 kilometers of length by 15 kilometers wide and runs in a north-southly direction covering a surface area approximately of 750 square kilometers.²⁸ Its physical boundaries are marked by *tepüis* and rivers (see Figures 4.4 and 4.6) such as the spur of the *Auyantepüi* and *Aicha tepüi* to the west. A flat mountain range distinguished by the *Sertepüi* peak to the east and the *Aprada* range to the south. Toward north the valley is open and is delimited by the *Carrao* River.

The valley encompasses 21 Pemon Kamaracoto settlements, comprised of approximately 328 households. According to present estimations, the Kamarata Valley holds 26% of the entire indigenous population in Canaima National Park, concentrated in 2.5% of the total land surface of the park. The valley is relatively isolated. The only means of access are by foot, dugout boats through the *Acanán River* (tributary of the *Carrao River*) or by plane.

The Kamarata Valley is an appropriate research area to inquire about issues of human-environment interaction and environmental degradation because of the following reasons: a) the valley is within an established National Park in a “politicized environment” in which different groups with different interest and uses of park resources interact and are in conflict; b) the relative remoteness of the valley controls for many intervening and influential factors that exist in the more accessible east sector of the park where a road system exists that connects the park with the capital of the Bolivar State and towns in the North of Brazil; c) the traditional social and economic structure and cultural ecological practices of the Kamaracoto are still in use allowing for an examination of

²⁸ Fray A. Valladares estimated the area to be 1,600 km² (Valladares, 1980). Probably this estimate is the area that the Kamarata Mission covered beyond the valley.

their resource use and management; d) the valley is experiencing gradual social and environmental change presenting an opportunity to study the issues historically and contemporarily; e) in the last two decades ecotourism has been developing in the valley presenting an opportunity to study how this expansion is contributing to social and environmental change; and f) the issues in the valley are generalizable to other areas in the Gran Sabana that share similar environmental and cultural characteristics as well as a common political, economic and historical context.

2.3 Field Research Preparation

Before conducting field research in the Kamarata Valley, four steps were very useful and necessary to find support for the research and to have a permit to conduct the study within Canaima National Park. First, three anthropologists that were familiar with the research area were consulted. This resulted in discussions of the study goals and objectives and the value for the communities in the Kamarata Valley. This resulted in contacts with community leaders and other key informants. Second, although not required, in a visit to Ciudad Bolivar, the Indigenous Federation of the State of Bolivar was informed about the research in the area. Third, a permit from the National Park Service was required. In the process of securing this permit, several meetings with Park officials at the national and regional levels were conducted to discuss the research project and the potential benefits to the management of the park. The last step was a community meeting in Kamarata to introduce the researcher and the project to community members, local and regional leaders for their approval. This meeting resulted in a discussion about the project and ended with a formal invitation to visit the communities in the valley and conduct the study.

2.4 Data requirements for the study and methods

To study and analyze the linkages between local resource relation, ecotourism development and environmental change from a political ecological perspective the following data was required:

- a) Characteristics of the physical environment of the valley;
- b) Local Kamaracoto population dynamics and trends;
- c) Ethnographic data on local culture, social organization, resource relations and local tourism management;
- d) History of the Pemon-Kamaracoto including historical and contemporary events and processes influencing them;
- e) Environmental issues and changes overtime in the valley, including how this issues are affecting the local communities;
- f) The history of Venezuela's protected area policies, specifically in regard to Canaima National Park;
- g) The political economy of tourism in Venezuela, including tourism in Canaima and the Kamarata Valley; and
- h) Stakeholder analysis of the park resources and local and external institutional relations, including past and present conflicts in the access, control and management of park resources.

All these areas of inquiry provided cumulative data and information allowing for triangulation in the analysis of the case study.

2.5 Research and Data Collection Procedures

Field research was conducted during three visits to the Kamarata Valley between May and November 1996. The Kamarata Valley has been of great interest for bush pilots, explorers, miners, missionaries, journalist, resource managers, tourism operators and researchers. This has resulted in many studies and reports where demographic

information and other historical, cultural and environmental data are recorded. This allowed a comparative analysis and to reconstruct specific events and processes relevant to this study. This information combined with key informant interviews helped in integrating the history of the valley and its people.

General information about the physical environment of Canaima and specifically from the valley was gathered from many secondary sources and publications that have documented extensively the park and the Gran Sabana resources. Further information was gathered from publications and maps developed by Técnica Minera, C.A. that is a branch of the Venezuelan Corporation of Guayana (CVG) which is the government entity responsible of the resource management and development of the Guayana region. This information allowed for a comprehensive description of the region and study site but little if any information was found concerning the environmental status or environmental change issues specific to the study area.

Analysis of the Kamaracoto population dynamics and trends in the valley, required data on population demographic structure and socio-economic characteristics which was collected through a census of the valley, and from secondary data and archival records. The census gathered information on household location, characteristics and services, household structure (i.e., size, age, gender, relation to head of household), literacy and education, religion, occupation, income, subsistence activities, land property and conflicts. Included in the census was a questionnaire for the heads of the household (both woman and man) including attitudes toward environmental issues, attitudes toward the community, participation, attitudes toward the park and tourism in the valley, and perceived contribution of external organization to community needs.

The census was conducted between August and September of 1996 and it gathered information from 200 households that comprised 17 of the 21 settlements in the valley. The other four communities (i.e., Saraupa, Kuana, Awaraparu and Wadety) were not possible to reach because of lack of resources for transportation, so their population was estimated based on the nominal census carried out by the Kamarata Mission in 1995.

The questions in the census of the Kamarata Valley were based on the official questionnaire of the 1992 Venezuelan Indigenous Census. This was done with the purpose of validating the information gathered with the official data compiled by the OCEI (Government Central Office of Statistics and Informatics). The information collected through the census serves as a baseline to compare it with other demographic data collected in the past and with information that can be gathered in the future. Some examples of past studies are: A social, economic and anthropological diagnostic of the Gran Sabana National Park conducted by the Venezuelan Tourism Corporation in 1972 (“Diagnóstico Socio-Económico y Antropológico del Parque Nacional Gran Sabana”); and the Venezuelan Indigenous Census for 1982 and 1992 conducted by OCEI. This comparison provided certain evidence of changes overtime that have occurred in the valley and stimulated questions about the causes of such changes.

The process lasted one month and 13 members collected the data from three Pemon settlements (10 from *Kamarata*, 2 from *Kovipa* and 1 from *Canaima*), which were asked to volunteer, who were trained for the task and received an honorarium for their participation. The group of interviewers consisted of four men and nine women, who were fluent both Spanish and Carib language (Pemon Kamaracoto). A two-day training

session was held in a community facility. The objective of the session was to explain the details and objectives of the census to the interviewers. Also, the training was to familiarize the interviewers with the census instrument, interview procedures and schedule, clarify questions and have practice opportunities to use the questionnaire and interview each other.

The success of the census was greatly based on the participation of community members. This had several advantages. First, it facilitated the peoples' willingness to participate in the census and respond to each of the questions in the survey. Second, having local interviewers facilitated the translation of the questions when it was necessary. Third, as part of a participatory research approach, it allowed the local interviewers to gather information directly. This was viewed as an important direct-experience to learn about what was occurring in the valley by gathering information about the settlements' characteristics, needs and socio-economic and environmental issues in the valley. Finally, each of the interviewers contributed with their own knowledge. Specifically in regard to where the inhabitants in each of the settlements lived or just to live, as well as, with their knowledge about the valley geography and its access routes through the savanna and the rivers.

The majority of the census interviews were conducted during the weekends by recommendation of one of the local leaders. It was school vacation when the census was conducted and people in the different settlements were dispersed, traveling, working seasonally in other places or living temporarily in their shifting cultivation plots (*conucos*). During the weekdays, it was very difficult to interview given that many families would wake up early to work in their *conucos*. They would come back to their

communities in the afternoon tired and just ready to eat and go to sleep early to get ready for the next day. During the weekend, it was much easier to ask people to participate because most families were gathered in their houses and the attention level was greater.

Part of the protocol was to visit each of the settlements to be interviewed a week in advance. This allowed informing community leaders about our visit, reiterating the purpose of the study and planning the logistics of the interviews. The latter included the mapping of each of the settlements and each of the houses with their specific location. This allowed for a total control of the existing houses and facilitated the distribution of the interviewed in an efficient way. A positive thing about carrying out a census during a month is that it allowed going back and interviewing people that were not in their house at the time of our visit. Despite of the many limitations, the data collected is extensive and reliable. Another fundamental factor in the success of the census was an extensive and precise list of people in the valley that was gathered by the Kamarata Mission in 1995 as part of its own nominal census. This census was based on birth certificates and household visits, and allowed to verify most of the names and ages of the people in the valley. Moreover it served as a control allowing to check whether households were interviewed or not, and whether people had migrated or just not present at the time. This information was given unconditionally by the father of the Kamarata Mission to help with this research.

Concerning the political economy of tourism in Venezuela, secondary data, archival records, national tourism policies, statistical data and news reports were used to build an historical account of tourism development in the context of the Venezuelan economy. This accounting explained the emergence of ecotourism in the national tourism

policies in the context of a new economic agenda in the 1990's, and how this is related to tourism in Canaima and the study site. Chapter five presents a summary of the findings of this research section.

Content analysis of international and national documents (e.g., treaties, policies, tourism enterprise contracts, and Indian rights legislation) and interviews with key informants identified historical and current political trends linked to the research site. This helped to analyze the different policy subsystems for parks, tourism and Indigenous People and determine if they overlap or if they operated at cross-purposes.

Structured interviews were also conducted with national and local park, tourism and indigenous people organization officials. These interviews resulted in the identification of actors at different scales and in an analysis of different stakeholders regarding their linkages and actions to promote conservation and development.

In depth interviews with National Park managers assessed parks operations and policies and the relation of these policies with ecotourism operators and local people (e.g., policies, contracts, management, cooperation, and monitoring). Interviews with tour operators helped to create a baseline information about visitors, tour operators' attitudes, operation and linkages with the park service and local communities in terms of contract and employment opportunities, respectively.

In depth interviews with community key informants, former and current leaders provided information about the development process of tourism in the valley and the emergence of local tourism enterprises, as well as, their role in the settlement's economy. Interviews with local tourist camp managers and employees focused on the operation of the camp as an ecotourism enterprise. This profiled local ownership and supporting

businesses generated (e.g., local suppliers of food, transportation, construction, and maintenance). Specific information included tourist visitation and spending patterns, the number of jobs and income opportunities that have been created; decision making in regard to the allocation and expenditure of money gained from tourism activities; how much is being spend locally; and how many goods and services are being imported (leakage's of money).

Local indigenous people's conflict over access to park and tourism resources was addressed through interviews with key informants and community leaders. These interviews shed light into the historical and current roles that park and tourism resources play in the sustainability of the local residents. The issues discussed included: resource utilization, property rights, incentives to invest and protect local resources and an assessment of costs and benefits from ecotourism activities.

A Participatory Rural Appraisal (PRA)²⁹ approach was carried out in the methodological form of a workshop. The workshop was designed to: a) understand Pemon-Kamaracoto's communities' environmental values; and b) determine the community's perceived environmental change and issues and its related causes and social consequences.

The workshop took place in the Kamarata community, in a rural school during two consecutive days (14 and 15 of September 1996). No specific criteria for selecting participants were set other than to ask that participants be adults who lived in the valley and who wanted to participate on a voluntary basis. We had to be persuasive in fostering participation given the format of the workshop, given its novelty and the topic of

²⁹ (see Chambers, 1994a, 1994b, 1994c) for a thourough explanation of the approach).

discussion. The group of participants turned out to be 11 people, an ideal size for the group dynamics required by the methodology. The group size gave opportunities to share insights and large enough to provide diversity of views. The group included four women and seven men. The breakdown included two elderly men, four adult men, one adult woman, one young adult man and three young adult women. The group also represented three of the largest settlements. Two of the men were the current leaders (*capitanes*) of their communities and one woman was a former *capitán*. Interestingly, there were two elementary school teachers (one man and one women), two women involved in an art and craft business, two tour guides (one man and one women), and one technician (man) that work for the Venezuelan Electric Co. (EDELCA) who monitors the weather in the valley. This heterogeneity of the group resulted in a very productive meeting.

The workshop can be described as a framed but semistructured discussion and brainstorming with group dynamics similar to a focus group. The facilitators determined the topic and method but the workshop was designed to trigger and generate a process of presentations and analysis (Chamber, 1994c). For the first two objectives of the workshop, a large matrix was set on a large piece of paper on a classroom wall. First, participants were asked to name elements in the Kamarata Valley that were relevant and important to them. These elements were listed in the first column of the matrix. After that, participants were divided into small groups of two to three people, and they had to select one element and discuss its importance. A discussion of what changes they have observed in relation to the element, what causes they attribute to such changes and what they believed were the consequences of such changes followed. After this discussion each group would present to the rest of the participants the results of their discussion and

fill a row in the matrix to the corresponding element. Having the large matrix on the wall helped visually share the information gathered, facilitating the analysis of the information, allowing as Chambers's states, for comparison, reflection and judgment. Interestingly, the format allowed people to discuss trends and the consequences of such trends without having a formal baseline for comparison other than the participants' observations and personal analysis. At this point, as in many PRA processes, everybody had the opportunity to ask questions, and verify the validity of the information by crosschecking and amending each other; building upon what was already discussed adding new insights and analysis. The workshop tried to center on emic information, meaning in the knowledge, categories and values of the local participants, instead of the views of the facilitators (Chambers, 1994c). Nonetheless, in many occasions the facilitators probed and synthesized information, interpretations and opinions for the sake of clarifying points and recording the information as accurately as possible. The facilitators' role was to guide the process and foster a two-way learning experience between facilitators and local participants, creating an atmosphere for communication and understanding of the different views of the problems and needs.

Data on the Kamaracoto resource relations, environmental issues and changes were gathered from the census, in depth interviews, the community workshop, participant observation and secondary data. Also from measures of a sample of conveniently selected shifting cultivation plots as an indicator of current Kamaracoto resource relation and subsistence level use of park resources. This included GPS and azimuth transect measurements and crop diversity composition as well as interviews with the owners of the plots. This data does not allow for analyzing changes over time given that there no

previous data collected concerning cultivation. However, it allows for qualitative analysis comparing such data with accounts from interviews and data from other secondary sources developed in other areas of the park.

2.6 Methodological issues related to Political Ecology studies

Studies in political ecology that are concerned with assessing the social causes and consequences of environmental degradation and that try to observe the interactions between the local and global level of analysis, present a methodological and conceptual challenge. On one side, political ecology studies face the same issue that many anthropological studies face when trying to appropriately explain how micro level events and process are related to larger scale events and process (De Walt and Pelto, 1985; Blaikie, 1994; Painter and Durham, 1995). In other word, how or why some factors become causes of environmental change? (Peet & Watts, 1996). In fact the task is not only to demonstrate such linkages or associations but also to demonstrate how they actually generate and/or contribute to change. Conversely, political ecology studies inherently are faced with what Whitesell (1993) calls an “epistemological dilemma” which he attributes to the expectation that general theory will be developed as a result of multiple cases of conjuctural processes of land degradation. This kind of expectation is in line with the grounded theory approach in qualitative research methods. This approach seeks to inductively build theory about a phenomenon “grounded” on the research findings and evidence (Creswell, 1994). The expectation here according to Strauss and Corbin (1990) is that the inductively derived theories would eventually relate to other theories within a discipline in a cumulative way, and that the implications of the theory will have practical applications. Most political ecological studies attempt to generalize

from analyzing human- environment patterns of interaction in a specific context and tend to use case studies research designs for such endeavor. These studies require multi-method approaches from different disciplines, combining quantitative and qualitative research paradigms, as well as, different units of analysis and a variety of data to reach policy relevant conclusions. This study does not pretend to resolve the dilemma faced by political ecology stated above. Instead, it adopts political ecology as an analytical frame to evaluate nature-based tourism as a conservation development model within a specific context. Yet the findings are discussed in comparison to data collected elsewhere and a model is proposed that illustrate the process of environmental change regarding shifting cultivation practices in the Kamarata Valley and its linkages to ecotourism development.

CHAPTER 3

CANAIMA NATIONAL PARK, ITS VALUES, ENVIRONMENTAL CHANGE AND RESOURCE MANAGEMENT ISSUES

As a background of the context of this case study, this chapter presents the protected area system of Venezuela, its environmental institutional structure and legal frame and its implication for indigenous people. This includes a reference to Venezuela's indigenist policies that defines the relation between the State and the indigenous population in the country. This is followed by a description of the region that comprises Canaima National Park, stressing the biogeographical characteristics of its resources as well as its wide range of biodiversity, cultural, energy and tourism values as a protected area. The indigenous people and tourism in the park is extensively discussed in chapter four and five respectively. The chapter ends addressing some of the environmental issues and management problems that the park is facing.

3.1 Protected Areas in Venezuela: National Parks in the ABRAES

In Venezuela, the State is responsible for managing and preserving the natural resources of the country and is also responsible in securing that the use of such resources derive collective benefits for the Venezuelan public (National Constitution, 1962 Art. 106). On this legal base 500 environmental related treaties, agreements, organic laws, common laws, regulations, decrees and resolutions have emerged (Hanes, Acevedo, & Schoolmaster, 1995).³⁰ Indeed Venezuela's environmental legislation is considered to be

³⁰ The breakdown is approximately over 89 laws and 400 decrees and regulations (Miranda et al., 1988). Venezuelan laws follow a hierarchy in their categorization, which indicate their relative power. After the

one of the most extensive and comprehensive bodies of environmental legislation in Latin America (Gutman, 1995). Nevertheless, it has received criticism for its subordination to utilitarian goals, its ambiguities and the diffuseness of language used in some of its central laws.³¹

Natural resource management is under the responsibility of both the Ministry of Energy and Mines (MEM) and the Ministry of the Environment and Renewable Resources (MARNR). Their responsibilities differ on whether the resources they manage are renewable or non-renewable. The *Organic Law of Central Administration* in its article 35 designates to the MEM the responsibility of planning and executing State plans for mining, hydrocarbons and energy that covers the development, use and control of non-renewable natural resources and other energy resources. Conversely, article 36 assigns to the MARNR the responsibility of planning and executing State plans for fostering quality of life, of the environment and of the renewable natural resources. This includes programs in conservation, defense, enhancement, regulation and use of water,

Constitution, Organic laws are higher in importance than common laws, and these are superior to decrees and resolutions. In the case that laws extend over each other or are in conflict, then newer laws overrule older laws (Miranda et al., 1988). The president signed laws that are passed by the Congress, and has the power to extend its administration's policies through promulgating decrees. Ministries on the other hand enact regulations that give specificity to the more general legislation (Hanes et al., 1995).

³¹ Hanes et al., (1995) suggest that Venezuela's environmental policies seem to weigh more toward the rational utilization of natural resources rather than on its preservation as a reflection of government's economic development policies. He argues that this is evident in the guiding principles of the Venezuelan environmental policy as established by the MARNR. He states that: "...subordination of environmental policy to utilitarian goals leads to a series of ambiguities, loopholes and lack of definition that weigh heavily on environmental policy-making structures in Venezuela. Since environmental values do not necessarily coincide with the economically inspired term "rational utilization", great deal of conflict is also generated over the correct interpretation of the law" (p.427-428). This seems to be supported by Silva (1997) who discusses the low status of the MARNR in the cabinet hierarchy. He explains that "higher up line ministries (such as economy, finance, development, mines and energy) and para-public enterprises (such as the Corporación Venezolana de Guayana) can stymie the environmental ministry's policies with relative ease" (p.475-476).

forest and soil resources, as well as, regulation of environmental detrimental activities to safeguard flora, fauna and parks resources.³²

The MARNR manages an extensive system of protected areas known as *Areas Under Special Management* (ABRAE). This system represents 71.7% of the national territory (see Appendix 3.1) with great variance in their degree of conservation policies as found in the *Organic Land Use Zoning Law* (LOOT) of Venezuela (Gondelles, 1992; Brewer-Carias, 1991). The first attempt for an environmental legislation in the country is traced back to a decree promulgated by the *Liberator* Simón Bolívar in 1825 in *Chuquisaca*, Bolivia aimed at mending the deterioration of indiscriminate deforestation (Hanes et al., 1995). This decree was never implemented but a legislation with a conservationist spirit emerged in 1910 with the promulgation of the first *Ley de Bosques y Aguas* (Forests and Waters Law). This law regulated the burning and logging of forests in river headwater zones (Mantellini, 1983). It was not until 1926 when the Dictator Juan Vicente Gómez created *Macarao*, the first national forest to protect a watershed that provides water to *Caracas*.³³ Venezuela created its first national park, *Rancho Grande* in 1937.³⁴ Then, in 1940 as many other countries in the Americas, Venezuela signed the

³² The legal responsibilities of each ministry (MEM and MARNR) allows them to execute administrative actions that at times result in contradictions especially in natural areas that hold multiple resources (i.e., mineral, forest, biodiversity and cultural resources). Such administrative actions have proven to create interinstitutional conflict such as policy decisions at cross-purposes that lacks of inter institutional planning and coordination at different scales. An example is the *Imataca Forest Reserve* in the Bolívar State that was opened for gold concessions (Franco et al., 1997). These contradictions are further reinforced in the *Forests, Soils and Waters Law* and its *Regulation*, and the *Organic Land Use Zoning Law*. The former law in its article 56 confers to the MARNR the administration of forest reserves, while the articles 135 to 155 of the *Regulation* emphasize that the administration is exclusively for forestry. The latter law confer to the MEM in its article 46 the control and implementation of plans in terrestrial and coastal areas with high energy and mining potential. Franco et al., (1997) argue that this legal frame tend to generate institutional conflicts and limit the possibility of putting forward any use of natural resource within a policy of sustainable development.

³³ This is believed to be the starting point of the current Venezuelan ABRAE system (Gondelles, 1992).

³⁴ A preservationist effort led by European naturalist, scientist and engineer Henri Pittier who settled in Venezuela in 1917. The rainforest and montane area that comprise the park was land confiscated from the

agreement of the Protection of the Fauna, Flora and Scenic Natural Beauties of the American countries (Washington Convention), ratifying it in 1941.³⁵ This law became the first legal instrument for Venezuelan national parks (Perez Hernandez, 1992) followed by the *Forests, Soils and Waters Bill* of 1942 that formed the legal base for the public use of parks and reserve (Miller, 1963). From 1937 to 1976, Venezuela had created 17 national parks that covered only 5% of the national territory. The Renewable Natural Resource Direction under the Ministry of Agriculture and Livestock administered the national parks and natural monuments from 1958 until 1977 (Gabaldon, 1992). In 1976 the *Organic Law of the Environment*³⁶ came into effect and the following year the *Organic Law of Central Administration* established the MARNR³⁷. The administration of the national parks and monuments was then passed to the Venezuelan National Park Service INPARQUES (*Instituto Nacional de Parques*).³⁸ Since 1976, Venezuela has added 26 more parks to its system for a total of 43 (Appendix 3.2. Evolution of Venezuela's

latifundium of Dictator Juan Vicente Gómez after his death. The main purpose of the park was to protect part of the watershed of the *Cordillera de la Costa* that provides water to the Aragua Valley, Valencia Lagoon and towns in the coast. The park would later adopt Pittier's name in 1953 in recognition of his extensive work and contributions in the study and conservation of natural resources in Venezuela and elsewhere (i.e., Costa Rica and Panama) (Gabaldón, 1992b; Tamayo, 1987; Nacional, 1994).

³⁵ This legal frame was instrumental in expanding the North American National Park model in Latin America that advocated setting aside land for parks free of human occupancy. To comply, this meant under the Washington Convention to declare parks of "public use", prohibiting private property, resettling of communities and expropriation of land in parks territory. Indeed in 1958, Venezuela started a process of expropriation and "sanitation" of human uses in parks lands with indemnization when appropriate (Gabaldon, 1992). This included laws that contemplated the resettlement of population when there is conservation and occupancy conflicts in areas declared protected or reserved (*Agrarian Law* Article 69). Until 1992 only one park has been "sanitized" in Venezuela raising the question whether it is negligence of the Venezuelan Government in proceeding, or it is an error of pretending to apply the terms of the Convention in the Venezuelan socio-economic and political context (Perez Hernandez, 1992 #415).

³⁶ Defines goals and instruments for a comprehensive environmental management in Venezuela.

³⁷ The establishment of the MARNR was the first of its kind in Latin America. Its creation has been attributed to the need to control environmental degradation in Venezuela in the mid-70's and the need to coordinate inter-ministerial activities related to environmental protection (Hanes et al., 1995).

³⁸ It was created in 1958 functioning under the Ministry of Agriculture and Livestock. In 1977, the service became an autonomous institution with its own law and judicial personality ascribed to the MARNR through the General Sectorial Direction of National Parks (*Dirección General Sectorial de Parques Nacionales*) (Gabaldon, 1992).

National Park System 1937-1993. That is an extra 82,876km², which in total represents almost 15 % of the national territory and approximately 20% of all ABRAES.^{39,40} According to the articles 6, 17 and 35 in the *Organic Land Use Zoning Law* (LOOT), ABRAES are created by presidential decree. Moreover, accurate delimitation of the area, institutional administrative responsibilities plus a zoning and management plan is mandatory as groundwork for their administration. In spite of this, at present, only 56% of national parks and 11% of national monuments have management plans (Miranda et al., 1988).

3.2 Protected Areas and Amerindians in Venezuela and the legal context

In order to understand the conflicting situations between indigenous people and protected areas in Venezuela, it is necessary to examine briefly such relation focusing on the legal context in which this relation is immersed. Following the political ecology frame this section examines the legal context, because such context plays a significant role in mediating the relationship between social actors and the environment. Likewise,

³⁹ Land allocated for national parks experienced an increase of almost 175% in 18 years (from 1976-1993). All of these policies of land allocation for parks are mainly attributed to government periods of the Democratic Action (AD) party. The AD governments are responsible for creating the MARNR and the passing of the majority of Venezuela's environmental laws, initiatives related to the party's environmental attitude as shown in its oil nationalization and agrarian reform policies and interventionists approach (Gutman, 1995). Some researchers link these type of actions to a policy line of an environmental policy agenda first formulated by President Carlos Andrés Pérez in his first period (1974-1979) in the stir of the first world environment summit at Stockholm in 1972 (Silva, 1997). This agenda have had implications for the establishment of other services such as for forest management (Servicio Forestal Venezolano) and for conservation efforts in Amazonas (Servicio Autónomo de Desarrollo Ambiental Amazonas SADA-Amazonas) (Silva, 1997). Other researchers recognize that ABRAEs have halted the rapid development schemes toward the south of the country, yet they view the expansion of ABRAEs as a hidden agenda of "frozen resources" for future resource exploitation and development. The Venezuelan Constitution and the Mining Law based on the fact that the Venezuelan State has the property rights of all sub-soil resources has established this view. Also, there is an almost perfect overlapping of ABRAEs with mapped areas of strategic minerals and gold deposits south of the Orinoco (Arvelo-Jimenez, 1982; Arvelo-Jimenez, 1984; Arvelo-Jimenez and Cousins, 1992b).

⁴⁰ The judicial base of the ABRAES and specifically the park system was reinforced with the promulgation of the *Partial Reform Law of the National Institute of Parks* in 1978; the *Organic Land Use Zoning Law* in 1983; and the Decree 276 in 1989 that dictates the regulations and norms for the land use, zoning, administration and management of National Parks and Monuments.

the legal context defines the relative power of these groups by defining their rights and duties and their access to resources and constraints.

By 1990, Venezuela had 39 national parks and with no exception all of them had conflicts with human settlements living within or at their borders (Amend and Amend, 1992). In 1982, 13% (18,626) of the Venezuelan indigenous populations inhabited at least eight of the major National Parks.⁴¹ This percentage was distributed among 304 communities, and included nine ethnic groups:⁴² Barí, Yupka, Pumé, Hiwi (or Guajibo), Piaroa, Yanomami, Sanema, Pemon and Warao (Lizarralde, 1992). Similarly indigenous populations are found in other five forest reserves (e.g., *Imataca* and *Caura*) and four protected zones (e.g., Caroní-Paragua) (Kuppe, 1997).

This pattern reflects not only an imposition of park and protected area boundaries over indigenous people's lands (which are considered *tierras baldias*⁴³ and therefore unrecognized by the State) but also a total disregard of Amerindians existence and the legal instruments that protect them since the 1960's. The pattern mirrors a historical *indigenismo*⁴⁴ and eco-colonialism⁴⁵ attitude towards indigenous peoples in Venezuela

⁴¹ Including the Cinaruco-Capanaparo (584,000 ha), Sierra de Perijá (295,000 ha), Canaima (3,000,000 ha) and Parima-Tapirapaco (3,500,000 ha), which are located in periphery states; Apure, Zulia, Bolivar and Amazonas respectively.

⁴² Ethnic group is define as any organized group with its own history, language and culture, and that is conscious of itself (Arvelo-Jimenez et al., 1990).

⁴³ Translated as "unoccupied lands", this category of land define in the 1936 *Ley de Tierras Baldías y Ejidos* refer to all those lands within the Republic that are neither ejidos (communal municipal lands), nor individual property nor are pertaining to corporations nor juridical persons (Art 1). (Kuppe, 1997) explain that the term apply to all those lands which are not legally owned by any individual or collective group. What this mean according to Kuppe is that lands, which have no official ownership title, are considered public property therefore owned by the federal State.

⁴⁴ Arvelo-Jimenez (1984) defines it as a system of policies referring to indigenous peoples in which the relation between the State and indigenous peoples is defined (p. 105). Such policies can be viewed as institutionalized mechanisms of coercion design and applied by the dominant system to generate social change in the indigenous peoples lifestyle (Arvelo-Jimenez and Perozo, 1983). The creation of National Parks without the consultation nor incorporation of local inhabitants in the plans, mainly indigenous peoples, seem to be part of a series of different *indigenismo* policies and legal mechanisms applied in Venezuela. This has resulted in the fragmentation, disintegration, or complete dispossession of the Indians ancestral territories (Arvelo-Jimenez, 1984).

(Arvelo-Jimenez, 1984; Lizarralde M, 1992; Lizarralde R., 1992). A resultant of this practice is the existing conflicts between indigenous communities and protected areas. Some changes of this attitude is observed at least at the MARNR level as shown in the decrees that created the *Alto Orinoco-Casiquiare* Biosphere Reserve and the *Parima-Tapirapeco* National Park in 1991. Lizarralde R (1992) argue that these decrees seem to stem on the Convention 107 of the *International Labour Organization* (ILO) when they state that these areas will respect the rights and territorial unity of indigenous populations, protecting their cultural patrimony and consulting them in the formulation of management plans.

3.2.1 Indigenous people in Venezuela and the law

In spite of the *indigenismo* attitude in Venezuela mentioned above, indigenous peoples benefit from certain protection at the law level (see Table 3.1) but such protection is highly dependent on the hierarchy, clarity, interpretation and enforcement of the law. Likewise is dependent on the overlapping of land use categories and the competing interests in their resources. Examples of this dependency are as follows.

In 1915 the Mission law was promulgated creating the establishment of Missions in the remote areas of the Federal Territories (Amazonas and Delta), and the Bolivar, Apure, Zulia, Zamora and Monagas states. The main purpose was to reduce and attract to

⁴⁵ Is defined by Lizarralde (1992) as a combination of Neo-colonialism and internal colonialism that take place when: ...“first world environmentalists take control over the environment, resources and life ways of indigenous peoples and third world nations, so as to further their own interests.”(p.62). He argues that although there are many reasons that justify the creation of parks, it is not a coincidence that large parks overlap indigenous peoples territories. He also argues that indigenous peoples view parks as another imposition of outsiders interests, ideologies and laws facilitating state control over indigenous lands with no assurance that the next government will not resettle indigenous communities in less productive lands.

the citizen life (civilize gradually) those indigenous tribes still existent in these areas and at the same time populate these areas (Armellada, 1977).

Table 3.1 Legal hierarchy of some norms pertaining to indigenous people in Venezuela

Juridical Norms	Laws and Regulations	Articles
National Constitution	Constitution (1961)	Art 77
Organic laws		
Ordinary laws	Agrarian Reform Law (1960)	Art 2 lit. d
	Tourism Law (1992)	Art 59
	Penal Environmental Law (1992)	Art 67
Decree laws	Decree 250 (1951)	
	Decree 626 (1989)	Art 27 and 28
International treaties*	ILO Convention 107 (1959)	
	ILO Convention 169 (1991)	
Regulations	Reg. for the Adm. of Nat. Parks and Nat. Monuments (1989)	Art 25
Ministry Resolutions		
State laws		
Municipal laws		

Note: Hierarchy shows degree of importance. Superior norms overrule the ones below.

* Need recognition by the President or through the Ministry of the External Affairs or approval by the National Congress through a law.

This ordinal law is an *indigenismo* tool that has resulted certainly in the partial integration of ethnic groups to the Venezuelan national life. Especially by means of cultural intervention, changes in indigenous settlement patterns and many times indigenous people exploitation in Mission zones (Arvelo-Jimenez, 1976; Jimenez, 1976; Arvelo-Jimenez et al. 1990; Thomas, 1981; Urbina, 1983). Arvelo-Jimenez et al (1990) argue that "the missions activities implanted and not required by the indigenous communities violate the constitutional precept of free cult and constitute an destabilizing force of both the system of values of such communities and their social, political and economic organization" (p. 20).

In 1951 the *Decree 250* was promulgated to protect indigenous peoples by regulating the access of outsiders to indigenous communities areas. The application of

this decree has been criticized because it is often enforced only to regulate foreign scientific researchers (Colchester & Watson, 1995). Yet, it is mostly because it is unevenly controlled in different regions and managed by different institutions that seem to be uncoordinated (Indigenous Affairs Department in the Ministry of Education, Corpoturismo and the National Guard).

The 1961 Venezuelan *Constitution* (Art 77) mandates a special “exception regime” for the protection of indigenous peoples and their incorporation to the national life. Under the Constitution a series of legal provisions are established to secure the special regime mandate. However, these are considered vague, inconsistent, lacking of coherence and moreover overlooked and unenforced (Arvelo-Jiménez et al., 1977; Arvelo-Jimenez, 1983; Colchester, 1995; Heinen and Coppens, 1986). The *Venezuelan National Indian Council* (CONIVE) have stated that despite the legal exception regime still no specific legislation has been established to guarantee indigenous rights as peoples and cultures distinctive from the national society (Gonzales, 1993). This legal situation is believed to detract from the promotion and defense of human rights creating a condition to legitimize their abuse and where indigenous people have no legal base for their protection (Gonzales, 1993).

The exception regime although vague, is noted in several pieces of legislature. The 1960 *Agrarian Reform Law* was seen as the first initiative toward recognition of property rights for indigenous peoples in Venezuela (Heinen and Coppens, 1986). The law (Art. 2, lit. d) warrants to indigenous peoples the right to enjoy the land, forest and waters they occupy or they owned where they traditionally inhabit. Yet in practice the IAN (National Agrarian Institute) under technical, structural and political constraints, had

a “peasantising” effect on indigenous people.⁴⁶ That is, it did not differentiate indigenous people from peasants, treating them together as one social class and issuing them mostly provisional land titles, as collectives to small extension of lands and fragmenting communally owned territories (Arvelo-Jimenez, 1982; Colchester, 1995; Kuppe, 1997). (Arvelo-Jimenez and Perozo, 1983) pointed that the Agrarian law has not secured such warrantees given that they are ambiguous in the law and subject to legal interpretation. They note that in fact the allocation of land has been granted following *criollos* patterns of land use resulting in a mechanism that legally divest indigenous people of their ancestral territories. Furthermore, the Agrarian Reform Law only provide lands that are economically or commercially exploitable and does not apply to protected areas (Art. 28) namely national parks and monuments, forest reserves, wildlife refuges and protective zones. These areas, which are State property, have policies regulating use access to their resources (which limit economic exploitations); therefore they are not subject to the allocation of land titles. This certainly limits a large percentage of indigenous communities of having definite land titles given that national parks and monuments, forest reserves, wildlife refuges and protective zones alone comprise almost 47% of the national territory (MARNR, 1995) and there is great overlapping of the categories and traditional indigenous territories.⁴⁷ After almost four decades since the emission of the Agrarian Reform Law until 1992, 73% of indigenous communities had no legal land title (OCEI, 1993).

⁴⁶ At the same time in the same law in its article 89 the IAN (National Agrarian Institute) can reallocate communities or extended families of indigenous people when necessary not defining in which cases. The National Cadastral Office of lands and waters under the Ministry of Agriculture is responsible in researching and determining the lands that were owned by extinguished indigenous communities and those lands that are hold and occupied by indigenous communities or extended families (Art. 167 numeral 4). Until today there is no known official publication regarding indigenous lands from any institution.

Some protected areas regulations have shown some openness to indigenous rights and consider them within management plans, although some ABRAES have demonstrated to be fragile protection against national and international economic interest and infringe against indigenous lands (e.g., Imataca Forest Reserve).

The 1989 *Regulation for the Administration of National Parks and Natural Monuments* specify that occupants of lands⁴⁸ that are declared parks are subject to a determine limited period of occupancy and use in spite of any legal land title they possess (Art. 25). However owners of agriculture plots can remain in the park as far or as long as they adjust to the required conditions compatible with the park objectives and permitted activities (Párrafo Único). These activities include annual and permanent cultivation's (Art. 27), limited livestock grazing (Art. 29 and 30) and limited exploitation of secondary forest resources (Art. 34).

In many management plans of national parks including Canaima, the protection of cultural values including indigenous people's settlements ways of life and traditions are contemplated (GOV, 1991). In the case of Canaima, until the early 90's there were many complaints by Pemón communities that they were explicitly not allowed to hunt or practice shifting cultivation. The National Guard would enforce this regulation and would confiscate *machetes* and firearms and even arrest indigenous people. Yet, there is no case known that shows that the park is being sanitized. The majority of indigenous people continue their traditional subsistence practices. In the case of Canaima's eastern sector management plan it even contemplates the incorporation of indigenous communities in

⁴⁷ If other protected areas were included this would add almost 72% of the national territory that would be exempted from the agrarian reform procedures.

⁴⁸ Does not refer specifically to indigenous peoples only to occupants.

the administration and management of the park (GOV, 1991). Still many communities within national parks have been affected historically by restrictions in the use of park resources. This is a subject poorly studied and documented.

With the promulgation of the *Ley Penal del Ambiente* (Penal Environmental Law) in 1992, the enforcement of restrictive policies by the National Guard within parks was minimized. The new law included an exemption regime for community members of ethnic indigenous groups in accordance with article 77 of the National Constitution. Article 67 of the Penal Environmental Law states that indigenous peoples are exempted of the sanctions established in the law. This is as long as the actions against the environment had occur where they usually inhabit and done accordingly to their subsistence practices and spatial occupation (Luzardo, 1992).

Policies protecting indigenous people have been also provided in the 1992 Venezuelan tourism law (Gaceta Official No. 35,117) as an extension of the exemption regime. Zones declared of tourism interest would be considered an ABRAE area (art.39) but this law is not applied in areas inhabited by ethnic indigenous groups according to the constitutional exemption regime (Art. 59). The tourism law prohibits the authorization of any tourism project, program or development that can harm or threaten the life of indigenous communities (Art. 60). A more specific Presidential Decree (626 of 7 December 1989) that sets norms and regulates tourist and recreational activities in Amazonas expressly recognizes and protects indigenous subsistence and sacred areas⁴⁹ (Art. 27). Authorization of the Department of Indigenous Affairs and the approval of the indigenous communities and the CVG is required beforehand any tourism activity can take place in indigenous zones (Art. 28) (Colchester & Watson, 1995). Colchester and

Watson (1995) have denounced that these regulations are frequently disregarded in Amazonas and often conflict between indigenous communities and ecotourism operations arise.

From the international law point of view, the Venezuelan government has been criticized and exposed in the United Nation Working Group on Indigenous Population by its refusal to approve the Draft Universal Indigenous Peoples Human Rights Declaration⁵⁰. Also it has been criticized because of its refusal to revise the 1957 ILO Convention 107 on Tribal and Indigenous Population⁵¹ as well as for its negation in ratifying the 1989 Indigenous and Tribal Convention 169 (Gonzales, 1993). Similarly, the Venezuelan Congress has not made any real progress in the passing of a proposed law regarding “communities, pueblos and indigenous cultures”, first proposed in 1988. The senate approved the proposed law in 1995 and the representative chamber was still discussing until the congress was dismantled in 1999 by the new elected government. Indigenous peoples rights recognition is about to change with the new Venezuelan constitution that incorporates eight articles pertaining to these rights.

The Venezuelan *indigenismo* and the legal basis that refer to indigenous people have resulted in a tilted balance against the rights of indigenous people. At times the legal basis has shown good intentions towards protecting ethnic groups rights such as the exemption regime required by the 1961 Constitution that is reflected in several laws such as in the agrarian reform law. However as shown, the limited protection defined in the

⁴⁹ Areas permanently and seasonally used by indigenous people (Signi, 1996).

⁵⁰ In 1990 the Venezuelan government presented a report to the United Nation Economic and Social Council specifically to the Indigenous People Working Group stating its arguments against 12 paragraphs of the UN declaration (Venezuela, 1990).

⁵¹ Colchester and Watson (1995) note that ILO does not list Venezuela as having ratified the Convention 107 because even though Venezuela has incorporated the Convention into national law in 1983 through decree 3,235 it has not officially passed such information to the International Labour Office.

law is constrained by the hierarchy, clarity, interpretation and enforcement of the law. On the other hand the country is subjected to institutional constraints as in the case of the IAN and to indigenismo policies (i.e., Mission law) and State development schemes. These latter factors are examined in the next chapter where a brief history of the Pemon is presented.

3.3 Canaima National Park

Canaima National Park is the local context of this research. It was created in 1962 and extended in 1975 to its current size.⁵² It is one of the largest parks in the Americas with an extension of 30,000 km² (7,413,000 acres),⁵³ and covers almost 7% of the Venezuelan Guayana region.⁵⁴ In 1994, the World Heritage Committee of UNESCO declared Canaima as World Heritage Site after meeting all four natural criteria's.^{55,56} Canaima is located in the Bolivar State (Figure 2.1) specifically between 6°45' - 4°30'

⁵² The objectives of the park are to: (a) preserve the structure of the ecosystems that that is protecting, (b) conserve the genetic resources of its flora and fauna, (c) maintain the region's biodiversity, (d) preserve the quality of the landscape of the Gran Sabana, (d) protect the cultural values of the Pemon etnia, their areas of settlement and traditions, and (e) maintain the stability of the Caroní watershed, source of water for the Guri hydroelectric dam (Plan de Ordenamiento y Reglamento de Uso del Sector Oriental del Parque Nacional Canaima. Decreto No. 1640, Gaceta Oficial 18 de Julio de 1991) (Oficial, 1991).

⁵³ Canaima is among the six largest parks in the world. As a reference, it is larger than the Adirondack Park (6.1 million acres) which is the largest US Park outside Alaska and in which you could fit the State of New Jersey and have space for Rhode Island (Fodor's, 1994)

⁵⁴ It includes three states south of the Orinoco (Delta Amacuro, Bolivar and Amazonas), covering a surface area of 453,950 km², almost half of the national territory (Steyermark, 1995).

⁵⁵ i. Be outstanding examples representing major stages of earth's history, including the record of life, significant on-going geological processes in the development of landforms, or significant geomorphic or physiographic features; or ii. Be outstanding examples representing significant on-going ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals; or iii. Contains superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance; or iv. Contains the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation.

⁵⁶ The committee declared the park world heritage site even when noting that a population of about 10,000 was resident in the savanna and that they have not been consulted regarding the nomination of the area. However, the Committee requested the Center and IUCN to cooperate with the State Party to initiate a process to review the boundaries of the site, taking into consideration the interests of the local people and the need to focus the nomination on the tepüi portion (approximately 2 million ha) of the Park (UNESCO-

north latitude and 62°54' - 60°38' west longitude (Ochoa, Molina and Giner, 1993). The park covers an extensive area east of the Caroní River, protecting its upper and middle tributaries. It is naturally delimited by the Carrao River and Lema Range to the north; by the Roraima-tepüi - Ilú-tepüi system to the Venamo river (along the Guiana reclamation zone border) to the east; and the Caroní River to the south and west (Schubert and Huber, 1989; Ochoa, Molina and Giner, 1993). For its management, the park is divided into two sectors. The eastern sector which is accessible by car through the only paved road that crosses the park connecting *Ciudad Guayana* to *Kavanayen*, *Icabarú* and the Brazilian border town of *Santa Elena de Uairén*;⁵⁷ and the western sector which is mostly accessible by airplanes, dugout boats (*curiaras*) and hiking. Since 1991 only the eastern sector of the park benefits from a zoning and land use plan (Decree 1,640) and a management plan for the western sector was in progress in 1994 (Huber, 1995).

The park is located in a region that lies on the Precambrian Guayana Shield considered one of the most ancient land surfaces of South America. According to Huber and Zent (1995), the Guayana Shield constitute a basement of igneous and metamorphic rocks mostly granites and gneisses, which are sheltered by vast layers of sediments, that form the lofty quartzitic and sandstone strata of the Roraima Group. Over millions of years these acidic rock forms have received intensive weathering that has resulted in a heterogeneous conglomerate of soil types in the Bolivar and Amazon region (Huber and Zent, 1995). Most of these soils as in other soils in the tropical lowlands are known to be

Report of the 18th Session of the Committee 1994). This latter issue has received criticisms from environmental NGO's.

⁵⁷ This road was envisioned in 1922 when the Venezuelan government began to make efforts to establish its presence in the southeast region of the country given the disputes between Venezuela and Great Britain over the Venezuela – British Guiana border during the 19th century. A decree was promulgated in 1934 for its construction but the topographic measurements of the road were not completed until 1956 (AGS, n/d)

unfitting for intensive agricultural practices given their low nutrient contents and their highly unfavorable chemical properties that make them very unproductive (Huber & Zent, 1995).

Canaima comprise mainly a portion of intermediate hill-lands, uplands and highlands of the Venezuelan Guayana in Southeastern Bolivar, showing a great altitudinal variance. The first two lands are found in altitudes between 500 and 1,500 m asl. They mostly have a sub-mesothermic temperature regime (mean annual temperatures between 24 and 18° C), and an ombrophilous rainfall pattern (average annual rainfall between 1,500 and 2,500 mm). Canaima have two well defined seasons: first the rainy season from early May to mid August with a short rainy period during December, and a second dry season from January to April, and September to October.

The highlands include mountains over 1,500 m of altitude, mainly “tepüis,”⁵⁸ distinctive table mountains (“mesas”) formed of Roraima sandstone and quartzite.⁵⁹ The tepüis are characterized by scarp, vertical and often overhanging walls ranging between 300 and 1,000 meters or more (Huber and Zent, 1995). They are distinguished by having a wide plain summit with a very rough surface, with many caves, crevasses, canyons, and sinkholes, produced by erosion along fracture zones and bedding planes (Schubert, 1995). The altitude of the tepüis in the park varies between 1,600 and 2,750 m asl. The highlands present a meso-thermic and sub-microthermic climate (mean annual temperatures ranging between 18 and 9° C), a short dry season from late December to

under the dictatorship of Pérez Jimenez. It was finally paved and inaugurated in 1990, representing a strategic scheme, including tourism objectives and commercial transaction goals with Brazil.

⁵⁸ Pemon terminology, a suffix used in names of mountains such as in *Auyantepüi* (Simpson, 1940). Tepüi are flat top mountains formed by Precambrian core of igneous and metamorphic basement rocks covered by large layers of sediment, with an age estimated of 2,000 million years (Huber and Zent 1995).

⁵⁹ Approximately 65 per cent of the park is covered by tepüi formations.

February, and a high rainfall pattern with estimated annual rainfall values of 2,500 to 3,500 mm (Huber and Zent, 1995).

As part of the Venezuelan Guayana, Canaima contains an incredible unique ecological diversity,⁶⁰ due to its natural history, its geomorphological formations and altitudinal variations, soil properties, and different climatic regimes. The vegetation cover of this part of the Guayana region comprehends forest, shrub, herbaceous and pioneer formations found in the different ecosystems of evergreen and semideciduous forest⁶¹, savanna, and tepüis (Huber and Zent, 1995). In the savanna, the common vegetation is gramineae, shrubs, spaced trees and small forest islands. Montane forests represent arboreal communities and gallery forests (“bosques de galería”) found on slopes and along rivers respectively (Huber, 1986). Rivers and other water bodies in the Gran Sabana are commonly dark (blackwaters stained by tannins)⁶², due to the lack of sediments they carry and the high content of humic and fluvic acids (Terborgh, 1992; Kricher, 1997). This makes this type of water often acidic with a pH below 5, and impoverished both in dissolved mineral cations, as well as, in nutrients and plankton (Rull, 1992). The varieties of ecosystems in the park support a wide range of habitats and niches that support a highly diverse number of ferns, flowering plants (Berry, Huber and Holst, 1995), trees, fauna, arthropods and many endemic and endangered species. For instance, the *Auyantepüi* and the *Chimanta* tepüis are known to have very high levels of floristic endemnicity and ecological diversity (Huber, 1995).

⁶⁰ The Venezuelan Guayana has a significant beta diversity of flora in terms of species number and composition as well as levels of endemism. Berry, et.al (1995) report 9,411 species, which 23% are endemic to the Venezuelan Guayana and 40% are endemic to the Guayana Shield.

⁶¹ These forests are dense, found in large extension or isolated patches, with medium-high to tall trees (15 - >25 meters), and an irregular physiognomy, which favors the growth of a dense understory strata (Huber, 1995).

Gorzula & Medina-Cuervo (1986) state that there is a relatively good inventory of the fauna along the Caroní river basin, the savanna and tepüis, but the fauna of the rainforest is not well known. Until their publication 150 species of mammals, 700 species of birds, 150 species of reptiles and 100 species of amphibians have been reported (Gorzula & Medina-Cuervo, 1986). The statistics according to the researchers represent approximately 70% of the total number of fauna species so far known in the Venezuelan Guayana. In a more recent study of mammals (Ochoa, Molina and Giner, 1993), of the 236 known mammals in the Venezuelan Guayana, 50% (118) have been recorded within Canaima. According to these researchers, the list of mammals would increase up to 92 species (for a total of 210 species) if more detailed inventories with a greater geographical scope were developed. This is highly probable given the ecosystem gradient in the park (Ochoa, Molina and Giner, 1993). The greatest taxonomic diversity (i.e., Chiroptera, Rodentia, Carnívora and Marsupialia) and trophic composition (i.e., insectivores, frugivores and omnivores) of mammals is observed in low land and montane forests compared to savannas, sub-tepüi grasslands and highland vegetation in tepüis (Ochoa, Molina and Giner, 1993). In regard to the degree of fragility of the mammal communities in the park, the highest sensitivity estimates (based on “*trepadora*”, limited distribution, rarity, endemism and subsistence and commercial value criteria’s) was for communities that inhabit tepüi summits, followed by lowland and montane forests (Ochoa, Molina and Giner, 1993).

⁶² Tannins are acidic compounds highly concentrated in the foliage of many plants in the neotropics. They help plants conserve their scarce nutrients by protecting them from herbivores (Terborgh, 1992).

3.4 Canaima and hydropower protection

The Bolivar State concentrates the largest hydraulic reserves in Venezuela. The availability of superficial water is estimated at 590 millions m³/year. The hydrographic nature of the State is composed by seven principle basins drained by large rivers systems with a myriad of falls such as the *Orinoco*, *Caroní*, *Paragua*, *Caura*, *Cuyuní*, *Aro*, *Cuchivero* and *Parguaza*. The Caroní River in combination with the Caura River (both south of the Orinoco river) and their tributaries provide 75% of the total hydraulic energy potential of Venezuela. One of the main objectives of Canaima National Park is precisely to maintain the stability of the Caroní River basin that has an extension of 95,000 km². The park protects between 60 to 70% of the basin drained by the Caroní (760 km long) and the Paragua (540 km long) rivers (Huber, 1995a). The Caroní basin is the source of water for three hydroelectric dams which provide electricity to operate important industrial plants and supply of electric energy to other areas in Venezuela, Colombia (contracts in case of energy shortages) and soon to Brazil.

Future extensive hydroelectric plans on the Caroní River is the development of *Tocoma*, which, jointly with *Guri*, *Macagua I*, *Macagua II* and *Caruachi* will form the hydroelectric complex of the lower Caroní, which will generate approximately 17,756 MW by the year 2010. Subsequently, EDELCA will argue for to the development of the hydroelectric exploitation of the upper *Caroní* in *Tayupay*, *Aripichi*, *Eutobarima* and *Auraima*, which jointly with the development of the lower Caroní is expected to generate a total of 27,500 MW becoming one the most important hydroelectric projects (CVG, 1997). However, these projects are considered to be in the pre-feasibility phase (IEO, 1997).

Currently, Venezuela has 19,675 million KW of electric generating capacity, of which approximately 54% are hydropower (CAVEINEL) in (Alvis, 1996). In hydroelectricity, the public sector companies have an absolute monopoly generating 100% of the power from this source. *Electrificación del Caroní C.A* (EDELCA) under the structure of the *Corporación Venezolana de Guayana* (CVG)⁶³ is the State enterprise in charge of developing the hydroelectric potential of the Caroní River since 1963. EDELCA is operating at 63% of its capacity and produces 79.4% of the power generated by the public sector. Furthermore, since 1979 it supplies 90% of the total electric energy produced in the country (MARNR, 1995).

At the present and according to analysts, the hydropower generated by the Guayana system saves the country 300,000 barrels of petroleum daily, and it is expected that after all the hydroelectric projects are operating, the savings will increase up to 750,000 barrels per day. This will contribute to the Government policy in diversifying the different energy sources in the country to liberate liquid fuels such as the oil production for the export market with the expectancy to generate more hard currency for the State.

3.4.1 Supplying Electricity to Brazil

A major plan that has implications for environmental impacts in Canaima National Park is the agreement for electricity supply between the Brazilian Government (represented by the Brazilian electric company ELECBRAS) and the Venezuelan government. EDELCA will invest approximately US\$ 87 million to more than \$100

⁶³ CVG was established in 1960 as an autonomous government authority and regional development corporation to study and lead the development schemes in the Venezuelan Guayana region, including the control of the steel mill and the hydroelectric installations (Snyder, 1967).

million up to the year 2001 in order to ensure a power supply for Brazil (Colitt, 1996).⁶⁴ The project includes the construction of 570 steel towers supporting and stretching high-tension wires for 600 kilometers of Venezuelan territory through the Canaima National Park⁶⁵ and 200 kilometers into Brazil, connecting the *Macagua II* hydroelectric plant with *Boavista*, Brazil (Venezuela Oil & Energy, 1997; Venezuela Now Fax News, 1997). EDELCA will build and finance the line from the Guri dam to the border. The first phase of the project will supply electricity to the North Brazilian State of *Roraima*, while a second and later phase is planned to reach *Manaus* (Cardona, 1996). This binational project is considered by many an important element in the economic integration that currently Venezuela and Brazil are developing and in Venezuela's intention to enter MERCOSUR.⁶⁶ This project is in clear violation of the Washington Convention, the Decree 276 and the management plan of Canaima National Park. Despite the opposition of the park's local indigenous people and national environmental NGO's; despite the advice by scientists in regard to the negative environmental and social impacts to the park; despite of the criticized environmental impact assessment procedures and economic benefits potential of the project; and despite the World Heritage status of the park, it is highly probable that the project move forward due to the lobby of powerful interests (Sharpe & Rodriguez, 1997).⁶⁷

⁶⁴ It will provide electricity to 50,000 people in the city of *Boa Vista*, Brazil, and to 5,000 people in the frontier town of *Santa Elena de Uairén* in Venezuela (Giusti, 1997).

⁶⁵ An EDELCA and *Consultores Inforeco* environmental impact assessment developed only along the 217 km section of *Las Claritas-Santa Elena de Uairén* state that the project entails a corridor of 8 km wide along the electrical power line setup. They estimate that it will occupy 1,781 ha of territorial land, which 43% is Canaima National Park land, 12% Imataca Forest Reserve land and 4% is protected zone land of the Bolivar State (Giusti, 1997).

⁶⁶ Common Market of the Southern Cone integrated by Brazil, Argentina, Paraguay and Uruguay since 1991.

⁶⁷ See (SCAV, 1998) for a detailed analysis of the project and its impacts.

3.5 Environmental concerns in Canaima National Park: Shifting Cultivation and fires.

Shifting cultivation (also referred to as slash and burn, swidden agriculture or *conuco*) is an agricultural system commonly practiced in tropical forests that is based on a rotation of the land for production, between periods of cultivation and periods of fallow (Beckerman, 1987; Uhl et al., 1990; Zent, 1995). These systems considered passive resource management systems (Watson, 1989) have been extensively studied because they are considered good models as sustainable systems of production and wise use of tropical forests (Urbina, 1979; Uhl, 1980; Denevan et al., 1984; Harris, 1971; Dufour, 1990; Azuaje, 1991; Zent, 1995; Eden and Adrade, 1987). Different types of shifting cultivation exist depending on the ecological and the social-cultural conditions where is practiced (Dubois, 1990; Zent, 1995). Shifting cultivation can vary in terms of the duration of the farming and fallow periods, in the variety of crops cultivated and the intensity and complexity of the system (Dubois, 1990). The "conucos" as practiced by the indigenous people in the Neotropics, conform to the system of long fallow period. That is two to three years of cultivation and 20 to 25 years of fallow (Beckerman, 1985; Zent, 1995; Uhl et al., 1990). In chapter four, the shifting cultivation as practiced by the Pemon is discussed.

Shifting cultivation and fire practices among the Pemon is a big concern for ecologist and resource managers (EDELCA and INPARQUES) in Canaima. The ecosystem of the Gran Sabana region which includes most of the park, is characterized by a tropical humid climate and a mosaic vegetation cover of forest-savanna, considered common in South America but an exception worldwide (Fölster and Dezzio, 1994). This mosaic is attributed to a forest and subsequent savanna degradation process that has

direct long-term impacts for hydrological cycles and erosion processes. This process of degradation is called *sabanización* (savannization). It is defined as the continuous substitution of forest by savanna, and the subsequent degradation of the latter in a large scale due to the low capacity of the forests to recover and the frequencies of fires (Hernandez, 1987; Rull, 1992; Fölster and Dezzeo, 1994).

The increase of open savanna has been explained either by natural or anthropogenic causes (Fölster, 1986; Hernandez, 1987), based on present biotic and edaphic indications (Rull, 1992). Widespread forest fires have been documented correlated to long drought periods in 1926, 1939 and 1940 (Fölster and Dezzeo, 1994). Two thousand fires are produced every year in the Gran Sabana, especially during summer. Rull (1992) have estimated that approximately 8,000 to 10,000 km² of the Caroní Basin savannas are secondary. Natural causes have been attributed to successional trends, dependent on both climatic changes and fire (Rull, 1992; Fölster, 1992).

According to Fölster and Dezzeo (1994) it is evident that the Gran Sabana is experiencing a very old, slow and continuous process of degradation from forest to a savanna triggered by natural and human generated fires. The savanna type vegetation in the Gran Sabana has predominated the region since the Holocene (Rinaldi and Schubert, 1991) and even 18,000-13,000 years before present (Fölster and Dezzeo, 1994). The patches of forest in the region can represent an original more closed forest cover. Fölster and Dezzeo explain that the degradation process up to the state of shrub savanna can be a unique process of the Gran Sabana ecosystem without external intervention. That is the forest ecosystem reacts with little elasticity to a unique disruption like fire and shows low regeneration capacity. This is a natural process independent of human impacts. Fire

impact forests by killing the trees and generating secondary vegetation of shrubs and ferns. At this stage fires become an annual or biannual event and this frequency result in a transition from shrubs savannas to savanna vegetation, which is very fragile and susceptible to pluvial erosion. Furthermore, the soils in the Gran Sabana are very acidic and poor in nutrients, with a toxic mix of calcium-aluminum (Ca-Al). This generates high mortality among roots that are in contact with the soil. The roots are then very superficial (20 cm deep), are susceptible to droughts, and are very inefficient in absorbing nutrients. Under these conditions, the forest in the region maintains a close cycle of nutrients, which consist of investing in fine roots that make a mat of roots over the organic surface of the soil. In this way, trees are able to capture and absorb directly or through *micorrizas*⁶⁸ the organic matter produced by the decomposition of litter, branches, twigs, fruits, flowers, etc. Fire kills these superficial fine roots, which is fatal for the vegetation cover, apart from eliminating nutrients from the soil. In this way, the forest is destroyed and substituted by shrubs or savannas. Sixty to eighty percent of nutrients such as calcium (Ca), magnesium (Mg) and potassium are lost to fires, as well as, 3 to 25% of humus (Romero Díaz, 1992). Therefore, the frequencies of fires can generate not only the elimination of the forest but also the desertification of the savanna ecosystem, which has significant consequences for the Caroní watershed and its hydroelectric potential in the long-term.

Anthropogenic causes have been in the center of discussions that try to explain the forest degradation in the Gran Sabana. As mentioned above, archaeological and

⁶⁸ Micorrizas are organs formed by the roots of a plant and micelio of a fungus. They work like an absorption system that extends by the ground and is able to provide water and nutrients (nitrogen and phosphorus mainly) to the plant, and to protect the roots against some diseases. The fungus on the other hand receives from the plant originating sugars of the photosynthesis.

anthropological evidence points to the existence of prehistoric groups in the region during the Early and Middle Holocene (9,000 BP and 4,500-5,000 BP, respectively) (Rinaldi and Schubert, 1991) well after the time estimated for the predominance of the savanna vegetation type. Such palyno-paleoecological to date studies have not found any evidence of human interference in the Gran Sabana (e.g., pollen of cultivated plant layers of charcoal due to fires, etc). However, the findings do not rule out the existence of non-agriculturists human settlements. An important implication of this study, is in support of Fölster and Dezzio's view that the issue of "*sabanización*" is primarily part of a history of natural cycles due to environmental factors such as nutrient deprived soils, deficient drainage and extended climate seasons (Sarmiento and Monasterio, 1975; Eden, 1970; Colchester, 1981).

Current anthropogenic causes which undoubtedly contribute to deforestation and the savannization process include the practice of burning in both forest and savanna areas by indigenous people, as well as agriculture, cattle ranching, hunting, mining, lumber extraction, and tourism activities (Fölster, 1986; Hernandez, 1987; Huber, 1995b). The Pemon use fire not only to clear land for their conucos but also for hunting, communicating and reduce biomass in dry savanna areas to avoid extensive fires due to long dry seasons (Rodriguez, 1981). This practice has created a negative attitude toward the Pemon people making it difficult to involve locals in co-management efforts in the park. Huber & Zent (1995) view the Pemon's use of fire as a contradictory attitude towards the vegetation cover of the land that they inhabit. The Pemon according to Huber & Zent, have in the last century, intentionally degraded large tracts of closed forest into secondary scrub or fern field, reducing the already scarce forest area available for their

conucos. Although there is no doubt about the number of fires reported by EDELCA due to Pemon actions, many times these fires are more a symptom of a more in depth problem around culturally changing Pemon settlements (see Hough, 1988 for an example in Africa). This problem is not resolved with expensive fire programs, fire squads, and environmental education programs alone. More research needs to be done to understand if there is a spatial pattern of forest fires attributed to Pemon people given that EDELCA tend to monitor fires in high priority conservation areas

Fölster and Dezzeo (1994) assert that the local population is greatly responsible for the generation of these fires although they do not specify the extent of this responsibility. Still they believe that naturally fires occur and that savanna fires are part of the forest – savanna ecotone in areas with little human population. In formulating a dynamic concept to explain the degradation of the forest of the Gran Sabana they state that it is necessary to include the sensibility to fire of the tropical forest in the region and how this sensibility is dependent on the ecological conditions.

Of the alternative explanations to the existence of the forest-savanna mosaics in Canaima, Fölster and Dezzeo (1994) point mainly to the marginal conditions of the soils that result in general low vitality of the vegetation. In addition, they point to the drawback of the forest due to the expansion of the savanna resulting from fire. These researchers underline that the effects of the savanna degradation process have been based more in qualitative observations and inventories of soils and biomass than quantitative evaluations. In terms of remedial efforts, they maintain that it is easier to apply them to the fragility and degradation of the forest than to the degradation of the savanna. Yet, before any corrective measures and for permanent solutions, it requires a more thorough

understanding of both the biological and social causes of environmental degradation in the Gran Sabana.⁶⁹

3.6 Institutional Resource Management Issues

The extensive National Park System of Venezuela faces many institutional management contradictions that impair achieving its environmental protection goals. The park system historically has lacked the political will, funds, qualified staff and institutional capacity to be effective. In the case of Canaima when compared to other parks in Venezuela, it is considered to be in a “critical state” based on sensitivity criteria’s such extension, maturity of natural communities, isolation, diversity of landscape, degree of intervention, number of extinct species, capacity to recover, control over basins, ownership, regulation, operational plan, budget, technical personnel, provision of equipment, facilities, control and surveillance, access and political attractiveness (Blanco & Gabaldón, 1992).

Canaima National Park is managed by INPARQUES (National Parks Institute). However given that the park covers a large portion of the *Alto Caroní* basin, CVG-EDELCA as the *Autoridad Única de Guardería*⁷⁰ of hydraulic basins in the Guayana region (in coordination and with assistance of MARNR), have specific responsibilities for developing hydroelectric projects and managing and conserving the Caroní Basin. Indeed

⁶⁹ This is the main point that Vayda and Walters (1999) make referring to political ecological studies that favor political economic events or social factors as explanations to cause of environmental degradation while overlooking environmental issues. Moreover they criticize studies that only assume the political causes of environmental change but not actually demonstrating it.

⁷⁰ This legal structure is translated as unique guardian authority. An *Autoridad Unica* is an autonomous service under a Ministry without judicial personality but with budget and autonomous financial management. According to the LOOT (art.60) the purpose of *Autoridad Única* is to plan, coordinate, execute and control action plans and programs of zoning and land use required for the integral development of an area or program of its responsibility. Ministries, Autonomous Institutes and State government dependencies are subject to the direction of the *Autoridad Única*.

CVG responsibilities extend over all protected areas in Guayana. What's more it follows a multiple-use type of approach in the region trying to harmonize hydroelectric developments with gold and diamond mining among other development schemes that contradict the objectives of these protected areas.⁷¹ In many cases responsibilities have overlapped in areas that fall within Canaima, lack of coordination efforts has been evident and institutional programs have created potential conflict. For instance CVG developed agriculture extension programs in the Gran Sabana in the 70's that resulted in environmental deterioration (Azuaje, 1991; Urbina, 1983). Also the 1991, Decrees 1,448 and 1,742 normalized the already existing CVG mining concessions in the low and high Caroní basin regions (north and south respectively of the park boundaries) that at times have infringed on park boundaries and generated indirect detrimental effects on the park. An example of this is the recognition by the Environmental Permanent Commission of the Senate that both illegal and legal mining has produced dangerous the concentrations of mercury in the Caroní River and the Guri reservoir. Such concentrations are above World Health Organization standards creating a public health issue given that contaminated fish are consumed in the Bolivar State and elsewhere in Venezuela (Abrizo, 1996; Globo, 1996).⁷² Similarly in 1985, the CVG created another institutional entity, the *Autoridad Gran Sabana*, with an *Autoridad Única* designation to evaluate the CVG and EDELCA programs in the Gran Sabana. *Autoridad Gran Sabana* directive is to prepare action plans to halt environmental degradation in the Caroní basin; develop and consolidate indigenous communities; and carry on restoration projects in areas affected

⁷¹ An example of this is the granting of mining concessions by the CVG in the Imataca Forest Reserve.

⁷² This issue of mercury contamination plus savannization and deforestation is usually attributed only to illegal mining activities such as in the article by (Abrizo, 1996) overlooking the major mining concessions provided to multinational mining companies.

by human activities. Its programs include research and natural resource management, environmental control and supervision, environmental information, and extension programs for the development and consolidation of communities. The latter two programs would seem to have a heavy emphasis on environmental education for visitors, indigenous communities and society in general. Further, there would be implications for tourism development. Other examples of lack of coordination and conflict are the environmental education and fire-fighting programs of the Basin Management Department of EDELCA, the tourism management and zoning plans by the Bolivar State Tourism Direction in 1996 (that included Canaima National Park) and the continued Missions activities in the park. An indication of the need for coordination is the attempt made by the Regional INPARQUES Director in 1996 to initiate a greater and better inter-institutional relation with other organizations involved in the management of Canaima. This included the Gran Sabana Municipium (Alcaldía), the MARNR, EDELCA, the Autoridad Gran Sabana, CVG, the National Guard, the Army, the Bolivar State Government, environmental NGO's and others. The purpose was not only to reactivate agreements among institutions and coordinate efforts but also to find alternatives to minimize, change or eliminate the Pemon practice of slash and burn for setting conucos (Cordero, 1996). Some of the proposed projects covered: training of indigenous people in the management of tourism enterprises; projects of soil enhancement and alternative crops; cultivation of fish for protein sources; incorporation of indigenous people of the Gran Sabana in the frontier development projects of the Government; and strengthening of EDELCA's fire fighting program towards a more preventive program through environmental education (Cordero, 1996). The same lack of coordination has been

reported for mining activities in the region characterized by a judicial chaos and the intervention of a myriad centralized and decentralized government entities at the national, state and local level (Abrizo, 1996).

3.7 Structural adjustment impacts and environmental conservation in Venezuela

Venezuela's ABRAES and specifically its National Park System have not been immune to the major economic reforms and policies of the country. Carlos Andres Pérez started his second term as president of Venezuela in 1989, in an economic situation different from the oil booming prices of his first term in the mid to late 1970's. The economic situation implied an emergency plan and the government first thought of tightening controls but instead was forced to seek a credit assistance from the International Monetary Fund (IMF) in the form of US\$ 4.3 million, which contemplated structural adjustment and strict economic austerity (Martz, 1995). Indeed Carlos Andres Pérez launched a structural adjustment program (SAP) as part of an agreement with the IMF and WB for renegotiations of the country's external debt and financial assistance for balance of payments and sectoral structural financing (Markandya et al., 1996).

The strategy was totally different from Pérez first term (1974-79), which promoted economic nationalism, import substitution and state intervention. In February 1989, the new economic policies were publicized, which included a major devaluation of the bolívar (150% in 1989) and sizable increases in gasoline prices and transportation fares by the deregulation of prices for commodities and tariffs for services. Furthermore, it included the removal of general subsidies for most food items, privatization of public assets, elimination of foreign investment controls and reduction in direct taxes on firms (Martz, 1995; Markandya et al., 1996).

According to Goodman et al. (1995), these adjustments were the basis for enormous growth in the Venezuelan economy by privatizing industries and reducing government involvement in the market. However, by 1992 the expected benefits of the new economic plan did not “trickle down” to the average Venezuelan specifically the middle class and the poor. Income distribution became more unequal widening the gap between rich and poor, while income per capita that was one of the highest in Latin America until then, dropped in comparison to the rest of the region (Goodman et. al 1995). This brought unpopularity to the President and great discontent among sectors in the army forces. The adjustment program came to a stop with two military coups in 1992, which failed, and with the political process that forced President Pérez out of power on charges of corruption in 1993.

President Rafael Caldera won the presidency in 1993 with a campaign focusing on his honesty reputation and with the promise to revert market reforms and distressing economic measures (Serbín, 1995). However, two years into his administration, Caldera launched a program -similar to Pérez reforms- for modernizing the country. This program called the “Agenda Venezuela” consisted in structural adjustments and deregulation’s directed to reduce inflation and establish favorable conditions for investments and growth. This program was the Venezuelan response to the requirements of a 1,4 billion loan from IMF, which somehow certified the country’s competitiveness and prompted foreign investment. An extensive privatization effort played a central role in the strategy of the agenda; buy selling of public assets and promoting partnerships between private investors and the Venezuelan government. In this regard, the plan aimed to attract both national and international investors in different sectors such as aluminum, oil

explorations, iron-steel, gold mining, forestry, infrastructure and tourism development. To carryout the extensive privatization scheme the Venezuelan Government created the Venezuelan Investment Fund (FIV - Fondo de Inversiones de Venezuela) an autonomous institute of the national executive responsible to coordinate and implement the privatization policies and restructure of state entities. FIV has its own law and the privatization law that regulates the privatization process guides its function.

Although the effects of structural adjustment policies (1989-1994) on the environment in Venezuela are hard to discern from ongoing social and economic trends in the country, nonetheless, analysts have pointed to certain trends that correlate with accelerated deforestation (Miranda et al., 1998; Markandya et al., 1996; Sharpe and Rodriguez, 1994). These trends are linked directly to decreased environmental management and monitoring (Miranda et al., 1998) and indirectly to flexible foreign investment controls in natural resources exploitation, increased poverty, increased migration and competing economic activities that infringe on protected areas (Miranda et al., 1998; Markandya et al., 1996).

According to Miranda, et al. (1998) between 1989 and 1993 Venezuela reduced its investment in the environment by 35% and the MARNR cut its staff by 11%. In 1989 INPARQUES was restructured in a more efficiently organized structure while commissions were established aimed at managing tourism in parks and raising funds (Sharpe and Rodriguez, 1994). Despite these changes and the commitment of INPARQUES on conserving biological diversity, the structural adjustment had depressed the overall budget of the institution declining 48% in real terms between 1988 and 1994, as well as, budget allocation per unit area declined 67% (Sharpe and Rodriguez, 1994). In

addition, overall structural adjustments increased unemployment rates, poverty and migration catalyzing more encroachment and pressure on parks resources (i.e., agriculture, colonization, mining, hunting) (Miranda et al., 1998), increasing the threat to the park system in 1994 and curtailing INPARQUES protection efforts (Sharpe and Rodriguez, 1994). Efforts to increase in park personnel were mitigated by a 61% increase in land surface under management (from 8 million ha in 1988 to 12.9 million ha) in 1994. This increased the ratio of park rangers per management unit to 18% (from 44,000 ha in 1988 to 52,000 ha) (Sharpe and Rodriguez, 1994). Furthermore some parks were still lacking field staff while tourism in the park grew tenfold⁷³ (Miranda et al., 1998; Markandya et al., 1996; Sharpe and Rodriguez, 1994).

In the case of Canaima National Park, despite its importance within the national park system, it continued to be under funded and understaffed at least until 1996. The basic operational budget of the INPARQUES Regional Office remained the same (Bs. 2,100,000 ~ \$5,032) between 1994 and 1996 without consideration of inflation and increasing operational costs (Cordero, 1996). The eastern sector received only \$1,171 in 1996 for its operational budget and maintained one superintendent and 10 park rangers to manage 1,086,250 ha (Cordero, 1996; Rodriguez, n/d; Sharpe and Rodriguez, 1997). In the same year the western sector of the park remained without a zoning and use plan and had only one chief of sector and one assistant to manage 1,913,750 ha.

⁷³ The references do not discuss where this fact came from. Tourism or visitation statistics are not collected for all parks. It is only since 1996 -with the policy of self-generating income- that INPARQUES has been collecting systematically park entry fees that serve as visitation data.

3.7.1 World Bank Loan

A project that is expected to strengthen and enhance the Venezuelan Government capabilities to manage its national and urban parks as well as its natural monuments, wildlife refuges and reserves, is the 1995 World Bank's Venezuela-Inparques project. The estimated project cost are US\$96.0 million of which US\$55.0 million would be financed by the WB loan, and the remainder by the Venezuelan Government. The loan that is planned over a 5-year period includes the intensification of public environmental research, training and education efforts. Moreover contemplates the improvement of the financial sustainability of national parks and other protected areas by helping INPARQUES generate an increasing share of its own revenues. Miranda et al (1998), have pointed already to a direct effect of this loan in INPARQUES annual budget. They note that INPARQUES is currently operating on an annual budget of US\$34 million that represent almost a 6-fold increase compared to former budget allocations. The World Bank loan provides 70% of INPARQUES annual budget. It is expected that 85% of the loan will be allocated for national parks, changing a trend in which national parks used to receive only a small percent of INPARQUES budget (Miranda et al, 1998).

The WB-INPARQUES project does not include any explicit community development projects that can address park-indigenous community relations even though it is one of the most critical issues in many parks (Amend and Amend, 1992). This is only addressed indirectly in the environmental research component of the project (8% of the total loan). This component finances research on problems related to the economic activities of communities that inhabit the park or live around park boundaries and their subsequent impacts on the park (Banco Mundial, 1995). Park – local community conflicts

are left, in the case of Canaima, to the effort of environmental NGO's. For instance ECONATURA (Educational Association for Nature Conservation) with the financial assistance of the Nature Conservancy has developed a project, to evaluate through participatory methods, the threats and conflicts in both Canaima National Park and Aguaro-Guariquito (Rodriguez and Sharpe, 1996a). The long-term goal of the project is to find solutions with INPARQUES to the main threats and conflict that affect the management of the parks but does not include any type of conservation-development types of initiatives.

CHAPTER 4

THE KAMARATA VALLEY, THE PEMON KAMARACOTO AND THEIR CHANGING SOCIAL AND RESOURCE RELATIONS

This chapter focuses on the people in the Kamarata Valley -the Pemon Kamaracoto- who are the center to the analysis in this thesis. The objective is to provide an understanding of the socio-cultural and economic characteristics as well as the environmental relations of the Pemon that serves as a background to analyze both social and environmental change. The chapter starts with a synopsis of the Pemon settlements and population in Canaima National Park. Second, a brief history of the Kamaracoto within the Pemon history up to the present is reviewed. This provides an overview of the external factors (e.g., missionization, agriculture extension and mining) that have influenced their society.

Third, a description of the physical characteristics of the Kamarata Valley within Canaima National Park is presented. Fourth, a general outlook of basic ethnographic and cultural-ecological characteristics about the Pemon is discussed. The focus is on the Pemon social organization, which is key to understand social changes and the links of these changes to environmental issues. This includes a review of their traditional settlement patterns, their domestic unit of production and consumption, and their political organization (*Capitán system*). These factors represent what Urbina defines as the social conditions of reproduction of the society, and its political system. This section further presents the Pemon shifting cultivation system (*conuco*), which is the basis of their food

security and economic autonomy. Here is underlined the factors that are destabilizing this agriculture system affecting the sustainability of forests in the Gran Sabana.

Fifth, as a base to understand the Kamaracoto's current socioeconomic characteristics, census data regarding the Kamaracoto is analyzed. This includes data on population distribution, density and change overtime, number of neighborhoods, demographics, ethnic composition and migration, dwellings, religion, occupation, education and shifting cultivation.

All the aspects of the traditional environmental, economic and social relations of the Pemon serve as a base to understand the impacts of tourism on the Kamaracotos and their environment.

4.1 The Pemon and Canaima National Park

The Pemon are an ethnic group that belongs linguistically to the Carib-speaking family (Urbina, 1979; Thomas, 1981; Simpson, 1940; Koch-Grünberg, 1979; Migliazza, 1985). The word "Pemon" means people and is commonly used by the Pemon as a way to distinguish themselves from *criollos*,⁷⁴ non-Indians and other indigenous groups (Urbina, 1983; Cousins, 1992).⁷⁵ This Carib group is divided in three groups (Kamaracotos, Arecunas and Taurepan) concentrated in different parts of the Gran Sabana and with distinctive dialects – which they reciprocally understand (Layrisse and Wilbert, 1966; Thomas, 1981; Migliazza, 1985).

⁷⁴ Criollos are those neo-colonial, neo-Venezuelan and neo-Colombian populations composed generally of *mestizos* (racially mixed) and hybrid cultures (Arvelo-Jimenez and Bjord, 1994).

⁷⁵ (Cousins, 1992) finds five definitions in his literature review. He believes that the denomination "Pemon" is attributed to the capuchin missionaries in the 40's. On the other hand, the use as a self-denomination, he argues, seem to constitute a neocolonial "tribalization" before the Venezuelan State and society. Cousins understand this as a process of ethno-genesis of the "Pemon" as an ethnic group.

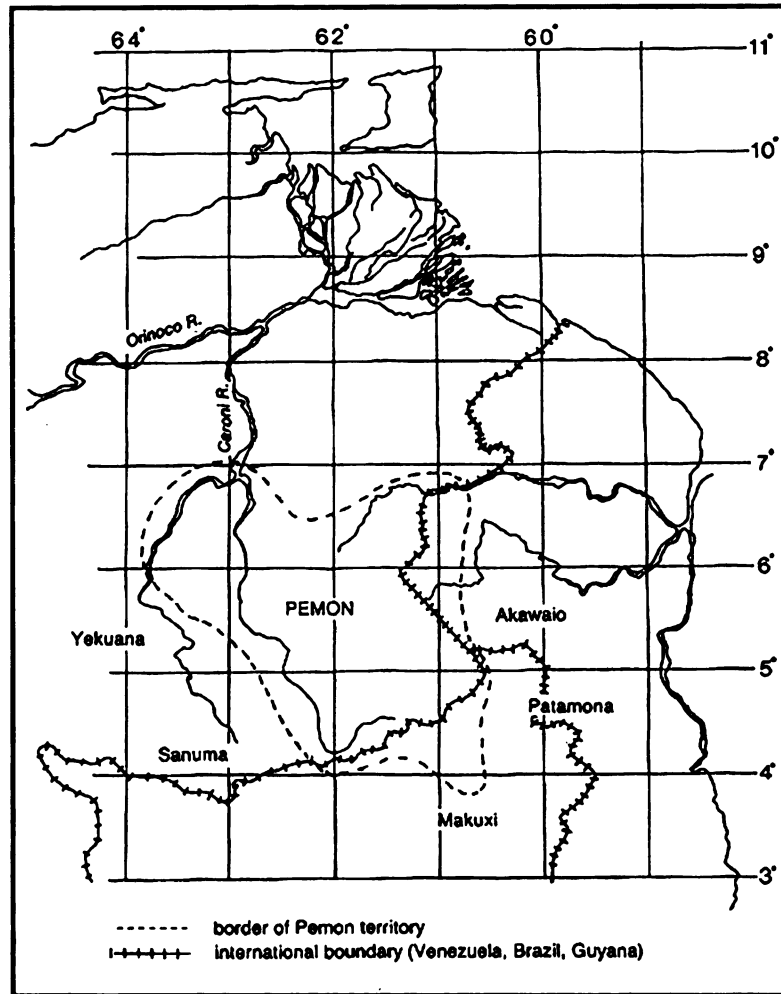


Figure 4.1 Thomas (1981) map of the Pemon territory.

The Pemon traditional territory is much larger than Canaima in terms of settlement distribution but mainly comprise the Gran Sabana region (Figure 4.1). The Kamaracotos are settled in the Kamarata Valley along the Akanán River in the northwest of the region that is not considered biogeographically part of the Gran Sabana (Schubert and Huber, 1989).⁷⁶ The Arecuna concentrate around the Luepa area north-center of the Gran Sabana and the Taurepan are located toward the south of the savanna covering areas along and both sides of the Venezuelan-Brazilian border (Thomas, 1981; Urbina, 1983)

(Figure 4.2). Moreover, mixed Arecuna-Kamaracoto settlements have been reported to inhabit certain areas around the middle and lower Paragua (Urbina, 1979; Thomas, 1981).

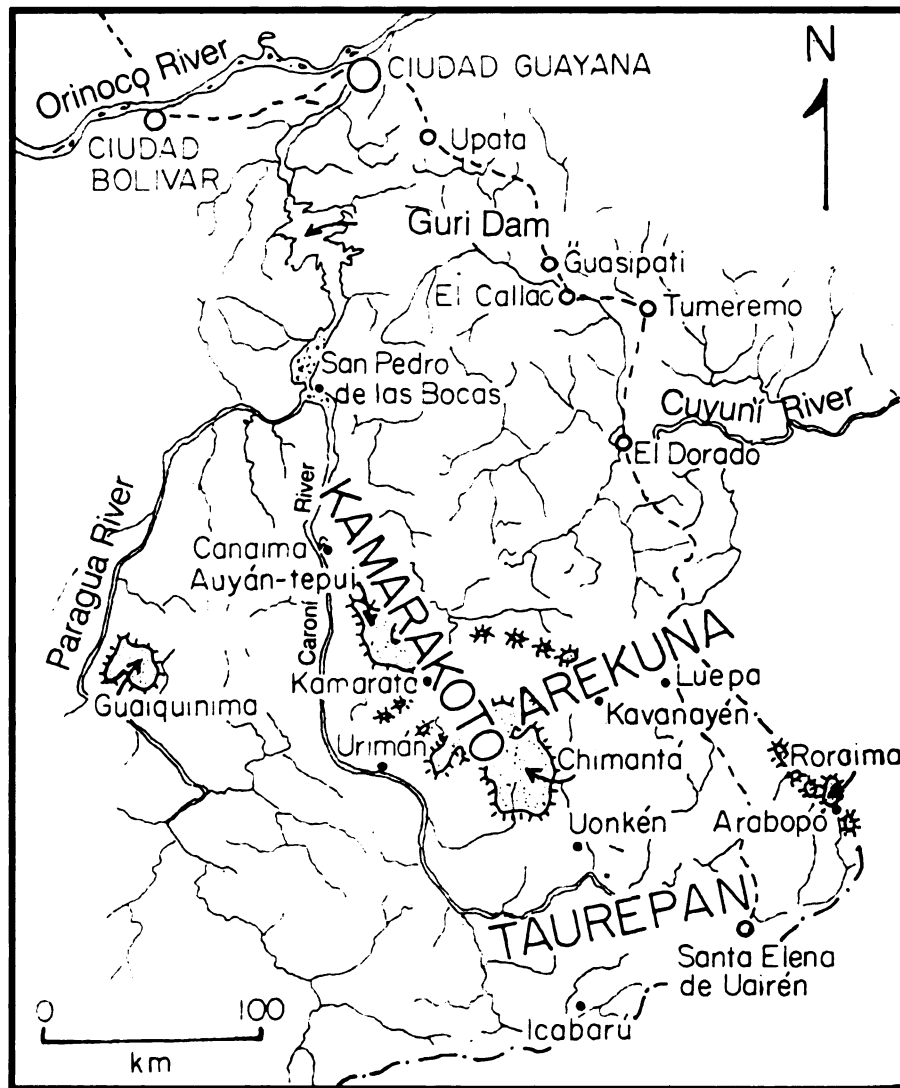


Figure 4.2 Pemon sub-groups distribution according to (Butt-Colson, 1985).

According to Colson (1973), the Pemon are related to the Makushi that live south in the Rupununi savanna and upper Branco River in Brazil and Guyana, and to the

⁷⁶ Although pertaining to the same physiography and natural province (Roraima formation) as the Gran Sabana, the Kamaracoto region is considered distinct given its elevation and extension (Layrisse and Wilbert, 1966).

Kapón, Akawaio and Patamona Indians who inhabit the upper Mazaruni, the Ireng and Pataro river regions. As Carib the Pemon are also linguistically and culturally related to adjacent indigenous groups in Venezuela such as the Kariña and the Ye'kuanas that live towards the north and west in relation to the Pemon traditional territory.

When Canaima was created in 1962, its boundaries were superimposed on indigenous land – mostly Pemon ancestral territory- without any local consultation. The objectives of the park stressed its environmental and economic rationale and recognized its value in the protection of indigenous people.⁷⁷ Yet the new parkland did not affect the Missions zones and their activities in the park therefore it added a layer of complexity to the State – Indigenous people relations.

4.1.1 The Pemon population and settlement pattern in Canaima

The determination of the indigenous population in Venezuela was only estimated until the official Indian census starting in 1961 when special census procedures were issued for remote indigenous populations (GOV, 1963). Table 4.1 shows the population

⁷⁷ In 1939 the creation of an indigenous reserve and a park was considered for what is known today as the western sector of the park. Indeed, in 1939 the Gran Sabana Commission studied the climate, agriculture and mining potential and penetration areas of the Kamarata Valley for the colonization of criollos. Moreover, it was studied for economic development as a way to incorporate this remote area of the Gran Sabana to the integral economy of the nation (Aguerrevere, Delgado and Freeman, 1938). The commission recommended for the Kamarata Valley the creation of an indigenous reserve and a National Park. This included the provision of a rural school with teachers' experts in agriculture and livestock and the supply of resources for the development of industrial activities for the Indians. In fact the commission viewed the valley as an independent unit and did not consider it good for colonization. This was due to its remoteness and inaccessibility, inferior climate (compared to the Gran Sabana) and limited areas for agriculture and livestock. Yet the commission stressed the valley's natural beauty and therefore its future tourism potential through aerial transportation. The commission observed that the valley was an occasional point of visitation of indigenous people from different areas and that the Kamaracoto were showing an almost permanent pattern of settlement. The commission stated that it was convenient for the nation that the aborigine had their reservations so they were not disturbed and could be educated. They concluded that given that the Gran Sabana was contemplated for white colonies, there was no other region in Venezuela that had the Kamarata Valley's conditions to attract and gather the different nomad tribes left in the Venezuelan Guayana (Aguerrevere et al., 1938).

of indigenous people in Venezuela at different scales (including Canaima) from the colonial years up to 1992 compiled from different sources.

Table 4.1 Indigenous Peoples Population in Venezuela, the State of Bolivar and Canaima National Park 1839-1992

YEAR	National Pop.	National Indigenous Pop.	Bolivar State Pop.	Bolivar State Indig. Pop.	Bolivar State Pemon Pop. *	Gran Sabana Municip Pop.	Gran Sabana Municip Indig. Pop.	Canaima Indig. Pop.
Colonial	0	350,000 <i>a</i>						
1839^b	957,136	52,415	56,471					
1926		136,147						
1936	3,364,347	103,492	83,159					
1937-39^c					1,284			
1941	3,850,771	100,600	94,522					
1946^d		130,000			2,500			
1950	5,034,838	98,682	127,436		5,405 ^e			
1961	7,523,999	75,604	213,543		2,700			
1966^f		62,692						
1967^g		90,000			3,500			
1970^h					4,000			
1971	10,721,522		391,665					
1972ⁱ								5,000
1977^j					10,000			
1979^k					8,000			
1981	14,570,085		681,607					
1982^l		140,562		21,778	11,462		7,623 ⁿ	5,537 ⁿ
1992^m	20,497,428	315,815	1,040,898	34,977	19,113	21,860	12,980	8,094 ⁿ
							<i>n</i>	

Note: *a* (Rosenblat, 1954); *b* (Codazzi, Baralt & Díaz, 1940); *c* (Simpson, 1940) Adding 820 Taurepanes, 264 Arecunas (Matalana, 1937) and 300 Kamaracotos; *d* (Armellada, 1946) He considers the national data to be exaggerated and he estimates the population at 60,000; *e* (Fuchs, 1967); *f* (Layrisse & Wilbert, 1966); *g* (Moron, 1967); *h* (Thomas, 1981); *i* (CONAHOTU, 1974); *h* (Galetti, 1977); *k* (Urbina, 1979) He estimates the population approximately between 8,000 - 9,000.; *l* (OCEI, 1985); *m* (OCEI, 1994) 13,298 the indigenous population in the Municipium Gran Sabana according to (OCEI, 1993); *n* Researcher's own estimation. Lizarralde (1992) estimates the indigenous population in the park at 4,898 for 1982 divided in 60 communities. *At the national level the official count for the Pemon population was 11,464 and 19,129 in 1982 and 1992 respectively; showing very few Pemon living outside the Bolivar State.

The idea here is not to analyze the table and the trends in population variation but to point to certain facts. Certainly the indigenous population in Venezuela has been increasing steadily since the mid 60's. Mansutti (1993) note, that overall the indigenous population has experienced an accelerated increase in its growth rate probably due to a decrease in mortality rates and an increase in fertility rates. For instance in the Bolivar

State, the population has increased 60% in only ten years (1982-1992). The tendency is toward a stable number or fewer settlements meaning permanent settlements with increasing population and density (Mansutti, 1993). The factors that have conditioned this trend among the Pemon in the Gran Sabana are reviewed later in this chapter.

Nationally the Pemon are the third largest ethnic group in Venezuela after the *Wayuu* (also known as *Goajiros*) and *Warao*, representing 6.05% of the total national indigenous population and 54.6% of the Bolivar State indigenous population (OCEI, 1993). Almost 100% of the Pemon live in the Bolivar State (OCEI, 1994). Politically, Canaima is located within the autonomous Gran Sabana Municipium, which has an indigenous population of 12,980 inhabitants of different ethnic backgrounds representing 59.4% of the total population (21,860 including non-indigenous people) in the Municipium (Table 4.1). Official records shows that the Pemon (which live mostly in rural areas), represent nearly 98.9% of the total indigenous population in the Municipium (Table 4.2) disseminated in approximately 100 neighborhoods⁷⁸ (OCEI, 1993).

Table 4.2 Population in the Gran Sabana Municipium in 1992

Ethnic Group	Population	%
Akawaio	12	0.09
Guajibo	1	0.01
Kariña	3	0.02
Eñepa	2	0.02
Pemon	12,913	98.94
Piaroa	6	0.05
Ye'kuana	1	0.01
Non indigenous	96	0.74
Others	17	0.13
Total	13,051	100.00

Source: (OCEI, 1993)

⁷⁸ The official census data refer these neighborhoods as communities or settlements. In this thesis the term neighborhood is used to refer to the Pemon settlement spatial pattern explained later.

The Pemon population increased in the Municipium from 7,623 in 1982 to 12,980 in 1992 almost doubling its size, experiencing a 1.7 % rate of annual population growth. At this rate, the doubling time of the population would be in approximately 41 years (see Table 4.3). By comparison, the Pemon population in the Municipium has grown much slower than the National Pemon population, which showed in 1992 a 6.6% annual population growth rate with an expected doubling of the population in almost 11 years (Mansutti, 1993).

Table 4.3 Pemon population growth rate at different scales and population doubling time periods

Scale	Pemon Population 1982	Pemon Population 1992	Rate of Increase %	Doubling time Years
National	11,464	19,129	6.6	11
Bolivar State		19,113		
G. Sabana Municipium	7,623	12,980	1.7	41
Canaima N.P	5,537	8,094	4.6	15

Note: rate of increase does not represent crude rate of natural increase. It shows only a percentage of change over time.

Specifically within Canaima National Park, by 1982, there were 5,537 indigenous people spread in 153 neighborhoods and by 1992 the population increased to 8,094 people practically all Pemon distributed in 80 neighborhoods,⁷⁹ showing a low density of .27 inhabitant/ km² (see Appendix 4.1 for settlement data). Still, these neighborhoods are mostly concentrated towards the center and southeast sectors of the region along the Gran Sabana road that reaches the frontier town of Santa Elena de Uairén (see Figure 4.3).

⁷⁹ This estimate is based on the OCEI Map of the Bolivar State published with the census in 1994. To determine the amount of peoples and communities in the park, a map of Canaima was layered over the census map approximating the scales. This helped in overcoming a major challenge to compare Pemon population overtime within the park because of the creation of the new Gran Sabana Municipium for 1992.

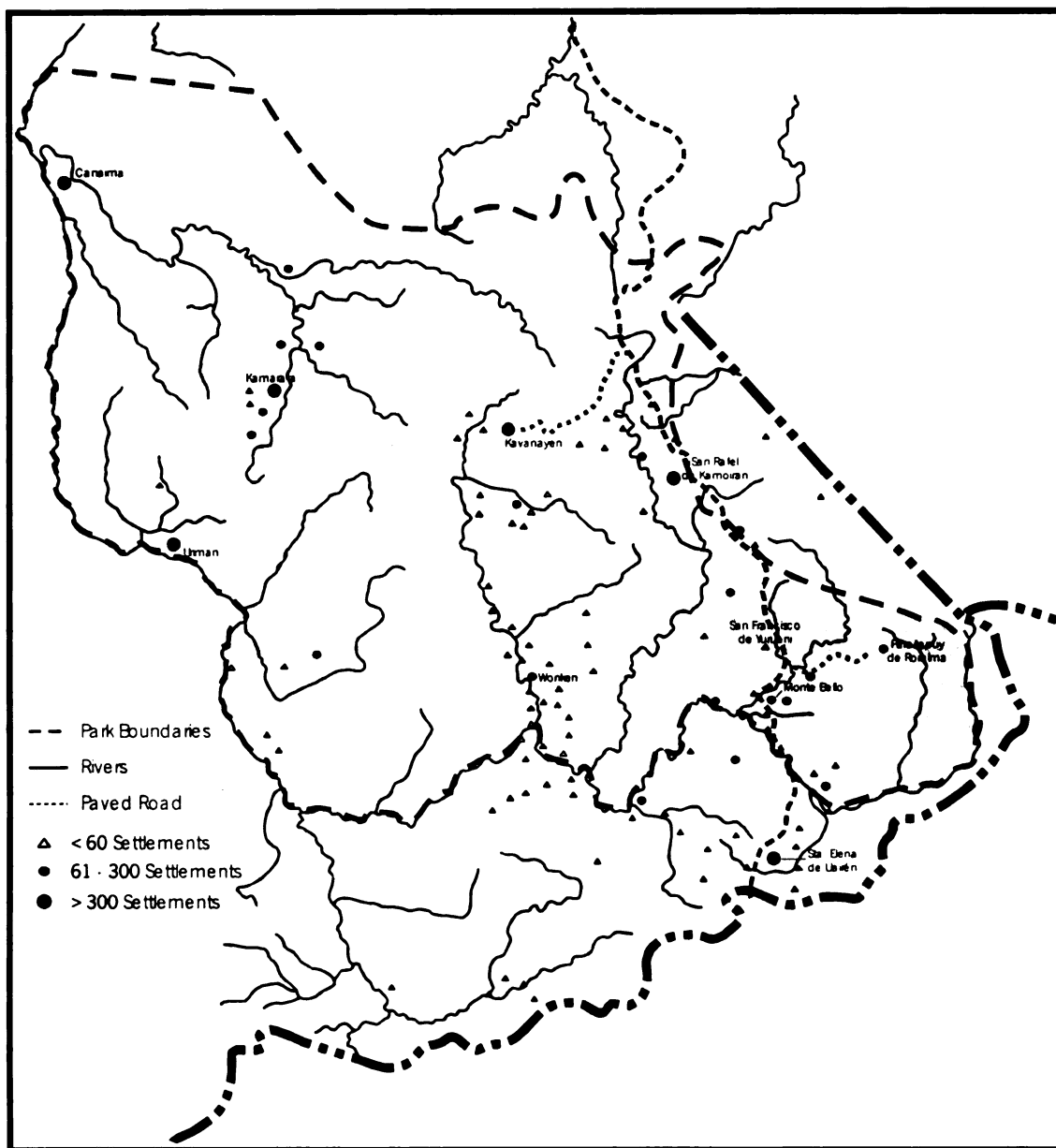


Figure 4.3 Map of Pemon settlements in the Gran Sabana Municipium. Source: OCEI 1992 census

The increase in population in the park from 1982 to 1992 represented a 4.6% rate of change per year predicting a doubling of the population in the park in 15 years⁸⁰ (see Table 4.3). Interestingly the annual growth rate within the park is 2% slower than the

In 1982 politically the area was divided in two Districts (Piar and Roscio) and within districts divided by the Pedro Cova and Urdaneta Municipiums respectively.

⁸⁰ This significant increase in population may also be attributed to different census methodologies used in the two census years for the total indigenous population in Venezuela (Huber and Zent, 1995).

national Pemón population rate but is much higher than in the Gran Sabana Municipium. It could be argued that this concentration tendency is an effect of the park that relatively protects indigenous people from communities.

Certainly, the traditional settlement pattern discussed earlier has been changing strongly in Canaima since the seventies following the trends described by Mansutti. As observed in the census, the overall pattern is that there are fewer settlements than in 1982 but with a greater population concentration over passing traditional settlement pattern (<40 - 60 inhabitants), showing a nucleation process.

Table 4.4 Population Concentrations in Canaima National Park

Census Year	# Settlements	# Settlements Over traditional pattern	# Settlements with pop. Concentration over 300 and range in pop. size
1982	153	25	3 / 309-578
1992	80	34	8 / 300-879

Source: (OCEI, 1985; OCEI, 1994).

Table 4.4 shows the population concentrations in Canaima National Park. Of the 153 settlements recorded in 1982, only 80 were recorded in 1992.⁸¹ Moreover, in 1982 only 25 communities showed settlements having a population larger than traditional settlement patterns (ranging from 45 to 578 inhabitants (OCEI, 1985). Contrarily in 1992, 34 surpassed such pattern (ranging from 48 to 879 inhabitants (OCEI, 1994).

Only three communities in 1982 presented high concentrations of people over 300, ranging from 309 to 578 (OCEI, 1994) while in 1992 there were eight ranging from 300 to 879 people. The largest settlements were the capuchin missions (*Kamarata*, and

⁸¹ Indeed in 1992, 94 settlements recorded in 1982 disappeared, changed names or simply were not recorded. The great majorities were settlements below 45 inhabitants, but there were two communities of 82 and 104 inhabitants that were not recorded. The increase in population and mismatch of communities between censuses may be also attributed to different census methodologies used in the two census years (Huber and Zent, 1995).

Kavanayén)⁸², the tourist camp in *Canaima* and the mining area of *Urimán* (see Appendix 4.1). Along the Gran Sabana road, the largest were tourist areas such as *San Francisco de Yuruaní*, *San Rafael de Kamoirán*, *Paraitepuy de Roraima* and *Quebrada de Jaspe*. The first three settlements are also communities, which received land titles in the late 70's. In fact, a nucleation process is very evident around missions, tourist and service areas. This could be an explanation to the population growth pattern in Canaima observed in Table 4.3.

In terms of indigenous peoples land rights in the Gran Sabana Municipium, the park that covers a great extension of the Municipium has limited the possibilities of land titles for a great majority of the indigenous population. In 1992, seventy-one percent of the communities had no documents of land ownership, and 36% have some kind of land conflicts with companies, official organizations or state enterprises and farms or ranches (OCEI, 1993). Of those with documents, only six had definitive collective land titles, 12 had use titles, 16 had provisional collective titles and three had *mensura*.⁸³

The Kamaracoto as well as many indigenous groups have not remained passive and have made many attempts to claim their rights. In 1953 and again in 1956 a delegation from Kamarata along with other settlements in different part of the country claimed property titles and demarcation of their ancestral territories even before the

⁸² Thomas (1972) have pointed that population concentrations among the Pemón have been found in areas influenced by proselytizing religious groups such as the Capuchin Missions and Seventh Day Adventist settlements. He argues that this has been possible and maintained by a solid "economic and ideological pull of external institutions"(p.4). Similar observations are made by (Urbina, 1982; Urbina, 1979; Fölster, 1995). By 1992 in the Gran Sabana Municipium of the 100 settlements surveyed, there were 28 settlements with Catholic Mission presence, 15 with Protestant Mission presence and other 6 settlements with other type of religious congregation presence (OCEI, 1993).

⁸³ Collective property land titles are titles provided by the National Agrarian Institute (IAN) to a specific community and they can be definitive or provisional. Use titles are documents that authorize inhabitants of a community to use, enjoy, populate and work the land they occupy. Mensura is a document provided by the IAN to communities after the land is surveyed (OCEI, 1993).

establishment of the Kamarata mission. At the time, the *Comision Indigenista* designated a commission composed of a lawyer and a surveyor to study the cases. The Kamarata case was considered among others and studies and recommendations were provided to solve the case (GOV, 1954; GOV, 1956) but this resulted in no land titles or demarcation. Between 1969 and 1974 the *Instituto Agrario Nacional* (IAN) made attempts to provide land titles to indigenous groups guided by the Agrarian Reform Law of 1960. The institute in the Bolivar State allocated 81,000 hectares of land to 385 indigenous families (Table 4.5).

Table 4.5 Land allocated to Pemon communities from 1974-1979

Community	# of Families	Ethnic Group	Hectares
San Rafael de Kamoiran*	67	Pemon	10,000
San Francisco de Yuruani*	45	Pemon	8,000
Paraitepuy*	33	Pemon	6,000
San Ignacio de Yuruani*	24	Amerindio	10,000
Santa Maria*	24	Pemon	5,000
Monte Bello*	13	Pemon	4,000
Las Malocas	39	Pemon	10,000
San Antonio	42	Pemon	10,000
Maurak	52	Pemon	8,000
Betania	18	Pemon	4,000
Apoipo*	28	Pemon	6,000
TOTAL	385		81,000

Source: (Arvelo-Jimenez & Perozo, 1983) *= within Canaima National Park boundaries. The rest are in the protected zone of the Caroní basin south of the park.

The IAN conducted a census of the families in Kamarata in 1972 as a first step to allocate parceled land with property titles to the families. This allocation never took place and the reason was not that the Kamarata community was within the boundary of the park. Of the 385 families that did received titles, 234 lived in communities within the parks boundary (along the El Dorado – Santa Elena road) covering an extension of

49,000 hectares.⁸⁴ The form of land distribution among indigenous people was highly criticized. Arvelo-Jimenez and Perozo (1983) explains that this meant not only a substantial reduction of the original indigenous territorial base but also a fragmentation of each of the corresponding tribal territories.

4.2 The Kamaracoto within the history of the Pemon

Approximately 500 to 600 years ago it is estimated that the Pemon began occupying the Gran Sabana uplands, migrating from adjacent savannas of the Río Branco to the south (Huber, 1995).⁸⁵ The Pemon were among the first four successive immigrations of Carib family groups that populated Venezuela in the so-called “fourth wave.”⁸⁶ Based on glottochronological analyses⁸⁷, the Pemon groups (Arecuna, Taurepan and Kamaracoto) are believed to have been a single group until approximately 1,000 years ago (10mc) when they separated into dialectically differentiated sub-groups

⁸⁴ This contradiction of policies in the IAN's indigenous people program of economic development occurs when Canaima National Park is expanded in 1975 as a combined work of the C.V.G and the Ministry of Agriculture. The IAN depended on the Ministry of Agriculture, which also managed the park system at the time. The expansion of the park created a policy gap given that was made without any consideration of the indigenous population and its development possibilities limiting also the IAN's objectives (see Clarac, 1976 for a detailed analysis).

⁸⁵ Initial occupation of the Pemon is still an open question. There is very little archeological evidence regarding the migration to and existence of indigenous peoples in the Guiana Shield region and more specifically in the Gran Sabana area (Rinaldi and Schubert, 1991). The Pemon as Carib are considered Neo-Indian tribes that expanded across northern South America and Venezuela facilitated by the use of slash and burn agriculture estimated to be fully in practice in the year 1,000 BC (Layrisse and Wilbert, 1966). According to Rinaldi and Schubert (1991) archaeological and anthropological evidence points to the existence of prehistoric groups in the region during the Early and Middle Holocene (9,000B.P. and 4,500-5,000B.P. respectively).

⁸⁶ This understanding is based on the theoretical frame of the Venezuelan cultural areas by Acosta Saignes (cited in (Barceló Sifontes, 1982; CONAHOTU, 1972). Also by some archaeological evidence (Osgood, 1943) and by the hypothesis set by Salazar-Quijada (1985) who tries to explain the different population layers and the actual location of indigenous groups based on linguistic and toponimic evidence.

⁸⁷ Refers to a statistical analysis applied to vocabulary (based on a count of lexical items) to assess the degree of relationship between two or more languages and the chronology of their splitting off from a common ancestor (The Oxford English Dictionary).

(Layrisse et al., 1962).⁸⁸ A more accurate research of subgroup relations is the blood group antigen study conducted by Layrisse et al., (1962). This study shows that the Arecuna and the Taurepan had Diego gene (Di^a) frequencies within the range expected for Carib ethnic groups, while the Kamaracoto showed a low frequency. This low frequency is thought to be due to genetic drift given the relative isolation of the group (Layrisse et al., 1962).

Little is known of the Pemon as an ethnic group at the time of contact during the colonial period. Testimonies of conquerors, explorers and missionaries provide an array of names and terms for a myriad of semi-independent indigenous groups with multiple identities during their journeys into the Venezuelan Guayana, south of the Orinoco (Cousins, 1991, 1992). According to Cousins (1991), the information and terms reported by these early incursioners are very difficult to link to the name, identity or the ethnic group known today as Pemon.

The distribution of the Pemon on the Venezuelan side is mostly attributed to historical social and political processes and social organization rather than an ecological adaptation to the Gran Sabana alone. Considering Tarble's (1985) model of Carib groups expansion in Venezuela, the Pemon should have migrated to the Gran Sabana region in a late period (1,000 to 1,400 AD).⁸⁹ Tarble explains that this period corresponds to a strong population growth saturating the Orinoco "riberas" creating pressure and migration movements from expanding groups (e.g., *Tupiguarani* and *Arawak*) in the middle

⁸⁸ Glottochronological studies are highly controversial. They are criticized because of the basic assumptions and unreliability of the method, and are discarded by many historical linguists (Campbell, 1999). Therefore the phonetic variation of speech study by Layrisse, et.al (1962) among the Pemon sub-groups does not demonstrate sub-grouping relationships nor determine accurately the split-up time of the Pemon language. However the study can guide to directions for further research with more reliable methods.

⁸⁹ This means the Pemon would have populated the region 92 to 492 years before the arrival of Colon to the Americas and 370 to 770 years before the first expeditions up the Paragua River in the 1770's.

Orinoco towards nearby and outside areas of the Orinoco. It also corresponds to a period of the introduction of new agriculture techniques and an increase in commerce activities and armed conflict. Indeed important and strong interethnic relations and levels of sociocultural integration were established and maintained within a system well into the 20th century. This is known today as the System of Orinoco Regional Interdependence expressed through linking mechanisms such as warfare, trade, alliances and ritual services (Arvelo-Jimenez and Biord, 1994; Arvelo-Jimenez, Morales and Biord, 1989; Urbina, 1982).⁹⁰ In the interior of the Guayana, the Carib expansion continued along minor rivers and ground routes. The factors mentioned above could have pushed rainforest groups to tributaries south of the Orinoco and to the highland savannas such as the Gran and Rupununi savannas. Tarble argues that the modality of Carib expansion in the savanna highlands was mainly by ground routes following an adaptive strategy to a poor environment. Such strategy was characterized by dispersed and frequent resettlements of Carib groups searching for patches of rainforests for their agricultural practices.

On the other hand, given the high inaccessibility during the colonial times, the Gran Sabana is believed to have served as a refuge for indigenous groups against the incursions and reductionist policies of the Spanish missionaries in the low Caroní. Likewise, it protected many indigenous groups from the slavery activities in the Dutch Guiana and the expansion of the Portuguese in the south (Urbina, 1982; Cousins, 1992; Tarble, 1985). This seems to be supported by the fact that there are no archaeological

⁹⁰ In the case of the Pemon, intertribal relations were established with other Carib groups east and south of their territory with the Akawaio and Macuxi, and to the west with the Ye'kuana (Urbina, 1982). See (Arvelo-Jimenez, Morales and Biord, 1989; Thomas, 1973; Butt-Colson, 1973; Coppens, 1981; Coppens,

data in the Gran Sabana so far that can provide evidence of the presence of Carib groups before colonial times (Tarble, 1985). Tarble suggests that the Pemón occupation was late reflecting more a migration of groups searching for a refuge against European colonization expansion. She bases her proposal on the archaeological data from areas close to Guayana (Rupununi savanna and upper Esequibo) provided by (Evans and Meggers, 1960).

The oral history of the occupation of the Kamarata Valley according to my community informants, Maria and Inocencio, supports the idea that Carib groups migrated to these areas searching refuge. Maria explains that:

With the Spanish invasion, Carib groups found refuge around the *Tumeremo*, *El Palmar* and *El Manteco*⁹¹ areas because the Spaniards came to enslave them and give them maltreatment. Some wanted to fight the Spaniards, others got assimilated, others were placed to serve the white and others just escaped. One of them was a Makushi named *Araibone* who was escaping from other invasions in his territory (Brazil). He migrated to the Kamarata Valley with his family bringing cassava roots and seeds. In the Uapinao savanna he encountered another indigenous family headed by *Abaparari* who were migrating from the *Tumeremo* and *El Palmar* areas. *Abaparari* was an Indian soldier in the Spanish army and defected. *Araibone* and *Abaparari* did not understand each other and communicated through signs. *Araibone* settled in *Tucuipá*. Both families mixed while new migrations of Guaicas, Arawaks, Arekuna and Makushi populated the valley. *Acadapandé*, grandson of *Abaparari* lived in Uruyen. Frequent conflict and fights rose around fishing, land rights and access. The people that live in the area known today as Kamarata dominated the people settled in the Uruyen area but the population was reduced and many people left including the Arawaks and others. The proper Kamaracoto disappeared and today the Kamaracoto are a mix from different backgrounds. The original language and dialect is lost and they speak with a mixed language.⁹²

1971) for a more detailed view into these interethnic networks of trade and exchange relations of goods, services and information.

⁹¹ This information coincide with the creation in 1734 of Capuchin Mission in el Palmar (San Miguel del Palmar) and another in 1788 in Tumeremo (N.S. de Belén de Tumeremo).

⁹² Simpson records a similar account in 1940 (p.220-21) but with less detail and different geographical references. In his interpretation of the account he suggests that that the Kamaracoto are members of a migrating tribe called *Kamarakota* from an area between the north of the Cuyuní and east of the Caroní during the colonial times. Already settled Arecunas absorbed these migrants (in language, culture and physical appearance) in the Kamarata valley. His evidence is the similarity in the physical appearance between the Kamaracoto he studied and the Arekuna in the Gran Sabana. The oral history of the

The missions in the colonial period in the Venezuela Guayana were pioneers for the Spanish crown, opening the colony frontier, occupying the territory and founding mission towns. Early missionary efforts started in 1653 by Jesuits in the lower Orinoco followed by Capuchin mission's village foundations in 1682 (Butt-Colson, 1994/1996). Missioners in the expansion of their agenda found great resistance among the natives while trying to obstruct the conquest aspirations of the Dutch and the Portuguese.

It was not until 1724 that the Capuchin Mission started a more prosperous venture in Guayana (Arellano, 1986). Their history account of early contacts between Spaniards and Pemon descendents in colonial times were documented during their voyages of exploration to "reduce and civilize" indigenous tribes. One of these accounts is the five-month journey of exploration by the missionary capuchin priests Tomas de Mataro and Benito de la Garriga in 1772 cited by Armellada (1960). In this journey both priests navigated the *Caroní* and *Icabaro*⁹³ rivers and traveled the *Parakaima Sierra* to the savanna of the *Parime River*. In this trip, they mention the existence of many Indians of the *Camaragota*⁹⁴ nation in the *Carap* River tributary of the *Caroní* and all along the *Caroní* from the mouth of the *Paraua*⁹⁵ to the *Icabaro* Rivers. The priests Joaquin de Barcelona and Leopoldo de Barcelona seem to have visited the Kamarata Valley in 1780 (Armellada, 1960). Another early reference is the narrative of Fray R. Bueno, who worked in the Orinoco Missions from 1785 to 1804 (Simpson, 1940). A quote taken by Simpson (1940) describes the process of extracting Indians -mainly from the *Camaracotos* and *Guaicas* nations- to incorporate them as a labor force on the mission

Kamaracoto supports the linguistic similarities between the Kamaracoto and the Makushi pointed in the literature.

⁹³ Known today as the Icabarú River.

cattle ranches (Thomas, 1981). One of the first maps, if not the first, to map out a feature of the Kamaracoto territory is a map by Fray Carlos de Barcelona (1772-1776) called the Anonymous Capuchino by (Gonzalez, 1987). This map illustrates the land conquest by the Catalán Capuchin that covers an area between the Orinoco and the Equinoccial and shows the “*Serro Auyan*.” Gonzalez points out that the toponimic references that would have linked the numbers and letters in the map are missing. He assures that this could have confirmed the Spanish precedence about the knowledge of the region including the Angel falls.

Thomas (1982) indicates that the Capuchins were without a doubt the most important influence on the Pemon in the late 18th and early 19th century⁹⁶. In fact, the Capuchins worked for 93 years mainly in the lower Guayana covering the region south of the Orinoco between Angostura (today Ciudad Bolivar) and the Delta (Butt-Colson, 1994/1996). Armellada (1949 in Urbina) claim that the Capuchin missions in the low Caroní region only contacted the Kamaracoto groups through the Guayanos. Furthermore, he adds that Catholic missionaries never reached the savanna highlands during the 18th and 19th century and did not have any contact with inhabitants of the area.

The Catalán Capuchin Mission established 52 Indians or mission towns in the Guayana Province and by 1816 there were 21,246 inhabitants in the different towns in which 19,091 were natives of the Guayana (Arellano, 1986).⁹⁷ The Capuchin forcefully recruited and then reduced in their mission towns large ethnic groups of *Caribes*,

⁹⁴ This could be one of the first references to the Kamaracoto Pemon group of today according to Cousins (1991).

⁹⁵ Known today as the Paragua River.

⁹⁶ See (Butt-Colson, 1994/1996) for a more comprehensive analysis of the religious foundations in Spanish Guayana during the 18th century.

⁹⁷ This is similar to the estimation of Cousins (1991), who conservatively calculates at 20,000 the amount of indigenous people captured during the existence of the missions in the lower Caroní.

Guayanos, Guaicas, Guaraúnos and Aruacas and to lesser extent small groups of *Pariagotos, Arinogotos, Barinagotos, Achirigotos, Sálivas* and *Panacayos* (Arellano, 1986). For (Arellano, 1986) in Capuchin records there are no accounts of Arecunas or Pemon being reduced. However, (Butt-Colson, 1994/1996) show evidence from Spanish prefect reports on the contrary. In 1755 a mission village (San José de Leonisa de Ayma) was established near the Yuruarí River an important tributary to the upper Cuyuní River. Ayma concentrated *Guaicas* and certainly 163 *Barinagotos* also known as *Camaragoto*, which is a Pemon self-denomination. In 1767, a revolt occurred and 400 *Camaragoto* escaped (Butt-Colson, 1994/1996). A 1778 map by Luis de Surville in (Caulín & Ojer, 1966) locate the Barinagotos nation in what is considered today the Gran Sabana (Thomas, 1981). The map shows discrepancies due to the lack of knowledge of the area at the time and given its poor accessibility.⁹⁸ However, observing this map the Barinagotos are located east of the Caroní River, South of the Yuruarí and Cuyuní rivers and North of the Yuruaní River. It would not be surprising that the Ayma mission had recruited the Barinagotos from this region. Moreover, that the current Kamaracoto could have migrated from the region where the Ayma mission was built in the XVIII century to their current location. This area coincides with the oral history of the Kamaracoto because the Ayma mission falls between the towns of Tumeremo and El Dorado along the Yuruarí River (see Burr's Map of European Occupation in the year 1756 in Butt-Colson, 1994-96). A map elaborated by Brett (1868) show the Kamaracoto occupying the region between the Yuruán River and the upper Cuyuní River, just south of where the Ayma mission was established. This is corroborated by Butt-Colson, who affirms that the Kamaracoto have a long history of occupation of the upper sections of the Cuyuní and

⁹⁸ See Pablo Ojer critique of Caulín's map in (Caulín & Ojer, 1966).

tributaries such as the Chikanán. The *Barinagotos* (Kamarakoto) and *Guaicas* were used for military purposes in Spanish raids against the Dutch in the Cuyuní, polarizing the native Carib population. Some Carib groups migrated northwest to the mission villages in Guayana and others within Dutch territory towards the east (Butt-Colson, 1994/1996).

The Capuchins missions work concentrated on both northeastern and northwestern sides of the Pemon territory.⁹⁹ They created towns in the upper Cuyuní penetrating the area in 1748 trying to reach and settle coastal Caribs in missions (Thomas, 1981). In 1757 in their attempts to penetrate the area, the Capuchin tried to concentrate *Guaica* (*Akawaio*) groups in villages to fight the Caribs - their traditional enemies and allies of the Dutch-. Likewise, they attempted to stop an Indian slave trade route between the Caroní and Cuyuní to close the Dutch market but the attempt was failed by a Carib attack (Butt-Colson, 1994/1996). Yet, they successfully established towns such as Upata (1762) and Tumeremo (1788) and toward the northwest they established mission towns in San Pedro de las Bocas and Vila de la Barceloneta (today called *La Paragua*) in the lower Caroní in 1770.

The Indian towns or mission posts concentrated indigenous people to educate and Christianize them so to incorporate them into the Spanish way of life. They relied on a growing economy based mainly on cattle ranching in *hatos* (ranches) in open grassland areas and native people provided the labor force.¹⁰⁰ By the end of the 18th century, the Capuchin had in their mission *hatos* around 95,000 head of cattle and 2,800 horses (Thomas, 1981). The activities of the early Capuchin missions ended between 1817 and

⁹⁹ See Sir Robert K. Porter 1825 map in (Gonzalez O, 1987) as cartographic (copy of a Venezuelan original according to Gonzalez) evidence of the presence of the Spaniards both in the Caroní and Cuyuní rivers, and elsewhere.

1818 with the civil war and independence movement in Venezuela. According to Arellano (1986), 28 mission towns survived until 1817 and 18 currently operate in Venezuela.

In 1814, the British received as transfer the Dutch colonies of the Esequibo and Demerara. By late 19th century the northeastern Pemón were known to have traveled east away from their territory into British Guiana, which became an important region for trading goods and visiting English missions (Thomas, 1981).

In short, the colonial period resulted in the killing, reduction and fragmentation of many indigenous people by the mission regime and working conditions, by the colonists and the introduction of diseases (Cousins, 1991). Many indigenous people were assimilated and others regrouped and fused into new settlement areas. Cousins (1991) maintain that the regrouping, integration and assimilation of the different reduced ethnic groups that sought refuge in the savanna highlands during the colonial times was facilitated by their flexible and highly compatible organization and structure. This has provided them the means to survive overtime.

4.2.1 Influences after the establishment of the new Venezuelan independent state

Twenty-eight years since the expulsion of the Capuchin colonial missions, the Gran Sabana region was again the subject of new explorations, missionaries and scientific expeditions came at the end of the 19th and early 20th century. They accounted for the first contacts with the Pemón, including the Kamaracoto after the independence of Venezuela in 1821.

¹⁰⁰ See Carrocera (1979) for a more detailed explanation of the reductions of ethnic groups, the mission towns and their economy.

In 1845, the German explorer and botanist R.H. Schomburgh and his brother visited Roraima in his expedition from British Guiana to the upper Orinoco. This expedition attracted other explorers including a geologist and surveyor, an orchid collector, a zoologist, and others (Im Thurn, 1883). The British anthropologist Im Thurn visited the region from 1877 to 1879 and then again in 1881. He traveled from Georgetown up the Essequibo River visiting the *Kaieteur* Falls and the *Roraima* Mountain and then into Brazilian territory. He gathered geographical and environmental data on his journey and was the first to provide ethnological data about Amerindians such as the *Warrau*, *Arawak*, *Wapiana*, *True Carib*, *Ackawoi*, *Macusi* and *Arecuna* groups. Im Thurn returned to the area in 1884 and was the first explorer to climb mount *Roraima*. Koch-Grünberg (1979) a German philosopher, geographer and ethnologist, visited the North of Brazil and the *Kukenán* River valley in Venezuela from 1911-1913, making a systematic study on the *Pemon-Taurepan*. He learned about the existence of the Kamaracoto through an *Auaké* interpreter. He mentioned the Kamaracoto as a tribe that had commercial relation with the *Schirianá* and the *Auaké* providing them with iron and textiles. According to his informant, the Kamaracoto seem to have shared their valley with other groups. Grünberg writes:

In the Akanáng, a tributary of the Parauá before the Yauyang-tepö, live the Antaulikó who speak a dialect similar to the Kamaracotó and consequently also to the Arekuná (p.188).

The first official government record of the Kamaracoto is the visit of General Nicolas Meza who visited the savannas of the Acanán River in 1890. This visit was part of the special commission ordered by Cipriano Castro to explore the frontier region with

the English Guiana (Meza, 1890). In his report to the Ministry of the Interior, Meza propose strategic areas to build five towns to group indigenous people. He writes that:

From the upper Yuruán including the Avechica river one hundred and fifty Arecuna Indians can be reduced, which is the easiest and most honorable way to civilize; but exist around one thousand Arecuna Indians in the Camarata pampas in the Acanán river, tributary of the Carrau...who the majority desire to go to the Yuruán.

I took the Acanán river where the savanna and Indians mentioned are, I was received with great pleasure... here I met Macuchí and Monyogones Indians who move around the right flank of the Caroní River, Indians that all search for a light, are hospitable, honorable and appreciate the Spanish (p.220).

Five years later Francisco Chartier with his brother Federico and the Priest Joaquin Rozo explored the territory between the Caroní River and the Roraima peak mandated by the National Government (Chartier, 1895). They visited the Kamarata savanna by *curiara* through the Akanán, a trip that seems they did once before to Christianize; distribute religious objects and other goods. Chartier writes:

We arrived to the Camarata savanna. Here 200 Indians were waiting for us, which many we recognized from our last visit when Priest Joaquin Rozo baptized them. Those Indians received us with the greatest demonstrations of affection and took us to their village in a beautiful savanna one league (4.8km) from the place we disembarked. In the mentioned village composed of five big houses very well built, live some five hundred indigenous people whose chief gave use the most cordial hospitality by providing us accommodation in his own room. The house where we stayed has an elliptic shape; its lateral walls are of *bajareque* up to a height of one and a half meters. The dimensions of the house are as follows: 20 meters large, 12 wide and 10 high. In this house live eight families.

We stayed in the Camarata savannas until the 15 of December covering all its extension and visiting the different villages dispersed in the area. Here 1,226 Indians were Christianize of both sex and different ages; crosses were erected and blessed with the highest ceremony possible; the Holy Sacrifice of mass was celebrated with improvised alters artistically adorn by the same Indians; and national flags were situated which we saluted with dynamite and fire arms shots. To finish these ceremonies distribution of religious objects and goods such as gunpowder, *zarazas*, handkerchiefs, small mirrors, etc, would follow without discrimination of the children. The Indians with the greatest demonstration of joy always received these gifts (p.174-175).¹⁰¹

Other visits included the explorations of R.A. Lezama in 1916 searching for *balatá* and *sarrapia*,¹⁰² and the expedition of Juan Mundó and Felix Cardona in 1927-28. The latter did the first topographical survey and map of the Kamarata region. This was followed by several famous expeditions to the Kamarata Valley and Auyantepüi from 1937 to 1949. This includes James C. Angel “discovery” of Angel Falls (*Churun-Merú*), then the first natural science expedition lead by William H. Phelps to the Auyantepüi in 1938, the expedition of the *Comisión Exploradora de la Gran Sabana* in 1939 and the Ruth Robertson expedition in 1949 to measure the height of Angel Falls.

Exploration and scientific expeditions not only established contacts with indigenous groups but also accelerated the insertion of outside commercial goods and money exchange. The exploratory 1939 Gran Sabana expedition in which Simpson participated is an example of the introduction of money in the Kamarata valley. Simpson comments:

When we started to negotiate with them the Indians did not want to accept money... and they complained of a former expedition that had paid them with money, which was of no utility for them. When then eventually realized the value (for us) of the Venezuelan money and were able to purchase with what they had buying us goods of effective value (for them) they accepted happily the exchange. It was not strange that and Indian worker would ask his pay in money and come back afterwards to our store to use all their money in commercial goods that could have been able to acquire at the beginning without the use of money. This became a fun game for us except for the cashier (p.549).

4.2.2 Missions in the 20th century

¹⁰¹ Chartier (1895) in his report claims with his fellow expeditions to be the first Venezuelans to have reached the Roraima peak passing through the extensive savannas of *Camarata* as declared by the same aborigines.

¹⁰² The extraction of *Balatá* and *Sarrapia* (Tonka Bean), which had a strong market at the time, could have been one of the first commodities of exchange between the Kamaracoto and the criollos mainly for outside manufactured goods (i.e., machetes). Simpson reported in 1940 that for some time it was known that the Kamaracoto had extracted *Balatá*, some *Sarrapia*, and gold.

Thomas (1982) believes that the history of direct, external influences on the savanna Pemon is primarily the story of religious doctrine and the result of experiences of the social and economic life at mission centers. Urbina agrees with Thomas stating that the stages of internal changes among the Pemon society began in the late 19th century with the rise of syncretic religious movements among the Makushi, Akawaio and Pemon as a result of Christian activities from the British Guiana. This was followed by the activities of Seventh Day Adventists from 1900 to 1928 up to the influence of Franciscans missionaries that started in 1930.

Certainly, an important cultural influence among the Pemon emerged around 1870 – 1880 in a time when Anglican missionaries were evangelizing Amerindians in the new British colony including Pemon *Makushi* that had settled in the Demerara River area. According to (Butt-Colson, 1983), from this contact and interaction, the Amerindians obtained goods and knowledge, and a syncretic religion called *Hallelujah*. Hallelujah resulted from a synthesis of indigenous religion and the Christian teachings under specific circumstances that allowed for the selection and adaptation of Christian beliefs into the conceptual system of the indigenous people. The Hallelujah, considered a religious philosophy expressed through dances, sang prayers and with its own prophets (Butt-Colson, 1983) was adopted widely in the late 19th century and early 20th century.

The Hallelujah was well incorporated among the Pemon by the time the new catholic mission activities were reinstated in 1922 in Venezuela. Today Hallelujah churches can be found in the Gran Sabana including some in the Kamarata Valley. These churches can be found and coexist in areas where Capuchin or Dominican Mission centers are located, along with Adventist churches.

The Venezuelan government promulgated the *Ley de Misiones* in 1915 to establish presence in the Guayana disputed frontier by granting to the Catholic missions through Vicariates the civil and ecclesiastical power to convert and civilize the native tribes and groups dispersed in different regions. The rules for the implementation of the law were established in 1921 and the Capuchin missionary jurisdiction was reinstated in 1922 when an agreement was signed between the order and the Venezuelan government (Arvelo-Jimenez, 1972) including the designation of a budget to contribute to Mission personnel expenses. The budget was expanded in 1949, 1956 and in 1966 in each new contract covering multiple expenses. At the time of the new mission law, Jesuit, Benedictian and Adventist missionaries from Brazil and British Guiana had already been expanding their missionary efforts in the south of the Gran Sabana from 1912 to 1930. The Protestant Seventh Day Adventist efforts were the only efforts that lasted until 1930 at which time they were expelled from Venezuela. This was based on a recommendation of the Capuchin Missions that convinced the government that the Adventist presence was a threat to the territorial integrity of the country (Thomas, 1981).

The 20th century mission activities in the upper Caroní started the 16 of January 1929, when Fray Ceferino de la Aldea and Fray Nicolás de Cármenes (presbíteros - Capuchin missionaries) begun an exploratory expedition from San Pedro de las Bocas up the Caroní as far as Urimán. They continued north into the valley of Kamarata through the Hacha Sierra, and back across the Serranía de Lema to El Dorado on the Cuyuní. The trip ended on April 1st when they arrived at Tumeremo (de Alcobilla, 1929). They reported 600 docile “Arecunas” living in Kamarata who had chickens and pigs and maintained frequent contact with the Indians in the Gran Sabana where they searched for

women. They reported that the population in the valley was decreasing due to migration to Brazil and high mortality (91 in one year) due to flu, *tisis* and lack of medicine.¹⁰³ Given the perceived richness and fertility of the soils in the valley, they recommended building a Mission and a farm to serve locals groups and attract other distant groups of Indians from the Gran Sabana and halt the emigration (de Alcobilla, 1929).

The Capuchin went to establish missions in *Santa Elena* (1931) *Luepa* (1933 which lasted until 1942), *Kavanayen* (1942), *Kamarata* (1954) and *Wonken* (1959), while the Adventist started to operate again in the country after 1945 when a new constitution recognized freedom of religion (Thomas, 1981). None of the missions have land titles because they are located in *tierras baldías*, and their occupation is under a “*uso y usufructo*” regime for an undefined period of time.

The Capuchin followed what (Maybury-Lewis, 1999) calls a neocolonial policy of assimilation or preparation for assimilation supported by the Venezuelan government. This process was outlined clearly in the 1915 Mission law that reads “civilizing and evangelizing to “integrate” them (indigenous people) to the Venezuelan national life. Despite the creation of an office of indigenous affairs in the late 40’s, still the missions maintained the authority over indigenous people south of the Orinoco. The Ministry of Justice in 1954 describes the work being advanced by the Capuchin and Salesiano missions as a:

Program oriented to attract and christianize the indigenous element through those methods more rationale and effective such as the fixation of agriculture colonies and interns in educational institutes.

¹⁰³ This report coincides with (Thomas, 1982) explanation that Pemon were traveling to the Kamarang and Mazaruni region in British Guiana in the 30’s to the 50’s to visit Adventist missions. Informants in Kamarata confirmed this and affirmed that the valley was emptied after a large migration of Kamaracoto left to British Guiana following the promise of Adventist missionaries that God was going to visit over there.

The National Government observes with detained attention the work that is being done in these centers of indigenous reduction and studies the needs of each of them to procure satisfy them (GOV, 1954, p.7).

At least until the 1970's the Capuchin Missions created relations with the Pemon and conditions that were adverse at many times for many Pemon people. According to Thomas (1982), the Missions were known to operate boarding schools for Pemon children who were not allowed to speak their native language and also were spending significant time in the mission fields.¹⁰⁴ However conditions improved later by hiring Pemon as teachers in the Mission schools and a Bi-lingual Intercultural education regime was adopted in the early eighties. On the other hand Missions represented a local opportunity to obtain cash for outside goods given that the Pemon were hired as low wage laborers to work in mission construction, field and shop work. An example of the Mission-Pemon relations in the 1970's is the account of Carlos Figueroa in an interview with (Arvelo-Jimenez, 1976). Carlos Figueroa - a Pemon leader that grew up studying in a mission boarding school and then became the founder of the Indigenous Federation of the Bolivar State in the early 1970's – criticized the way missions operated such as the practice of selling costly used clothes so the Indians would not have bad habits. This affected his relation with missionaries. He explains that working in the Mission kept him increasingly indebt. As with many other Pemon he would try to gain his economic independence by selling the surplus of his conuco to the Mission, but the latter controlled the price. In addition, he tried mining diamonds that were also sold to the Missions.

In the case of Kamarata, the only data available about the mission activities is from the reports by the Caroní Vicariate to the Venezuelan Government. The Kamarata

¹⁰⁴ The Pemon language was used with the Spanish in religious services.

mission showed very poor and inconsistent statistics (at least the ones reported to the Ministry of Justice) to be able to make a thorough analysis. Data available only covered up to 1972. Yet, reviewing reports from 1954 to 1972, the Mission in Kamarata operated very much as any other Capuchin mission by building houses and towns and basing its economy on agriculture and cattle ranching in *hatos*. Kamarata was founded in 1954 operating in a provisional building.¹⁰⁵ In 1955 the Mission infrastructure was almost finished including a house for the missionaries, a church, a dispensary for the indigenous people and auxiliary houses (GOV, 1954). The mission centered its work on basic education, teaching and spreading Christian beliefs, habits, and providing health services and medicines. Economically the mission focused its work in cattle ranching, innovative agriculture activities and buying the surplus of conuco products and diamonds of the mining to the Kamaracoto. As with other missions the Kamarata mission relied on hiring indigenous labor force, although this was not accounted for in the mission's report.

The mission was constructed on the highest hill in Kamarata along the *Ataperé* River, overseeing the town that was being constructed below. In 1961 the mission started building houses for Kamaracoto families paid with the first earnings of the cattle enterprise (Valladares, 1980). Eight houses were built along a road perpendicular to the Mission as an example for others. Each house was constructed as a one-floor infrastructure with a concrete floor base and walls of concrete blocks, aluminum window frames and glass windows with metallic screens. The roofs were made of galvanized metal with wood and concrete base. These houses were the only ones built by the mission

¹⁰⁵ Father Angel Valladares Fernández founded the mission. The mission covers an area limited to the north by the Sierra de Lema to the headwaters of the Carrai and Karuay rivers up to the Churi River. Towards the south the area is limited by the Apakará River and towards the west by the division of the Caroní and

but they impacted the way the new houses were being build, as well as the traditional settlement pattern that was framed in a rural town with crossing roads facing the mission. Conversely, new houses were built with *bahareque* or *adobe* bricks and palm or zinc roofs because the mission did not have the means to build more houses. By 1972 the mission had a hydroelectric turbine and started supplying electricity to the houses in the town, and kilometers of *granson* roads were traced connecting the communities in the valley and land along the road was parceled for agriculture uses (GOV, 1972). Later on water was brought to the Kamarata community from the Auyantepüi through 25km of pipes across the savanna to the Mission and then distributed to the houses. In the late 70's the *Servicio de Saneamiento* promised to build 100 rural houses by providing technical assistance and credit to the Kamaracoto but the cost of transportation of materials was too high. Fr. Angel Valladares -the Director of the Kamarata Mission- at the time made a big effort in establishing a small *fábrica de cerámica* to make bricks. The ideas were to take advantage of the abundance of quality clay in the valley and justifying it based on the traditional ceramic art skills of the Kamaracoto and their need for rural houses. Even though he succeeded in building the *fábrica*, the production was short lived and the Kamaracoto never received a formal technical training to run the machinery and take over the management of the facilities, which became a political issue exploited and manipulated by regional politicians.

Agriculture activities started the same year the mission was founded. Four hectares of land were prepared to cultivate yuca, black beans, 3,000 coffee plants and 2,000 banana plants of diverse types. A common agriculture practice reported by the

Paragua rivers. The extension of this area occupies 7 km north south by 6 km east west covering approximately 4,000 hectares.

mission during the late 50's was to deforest mountain areas to cultivate pasture for the cattle and to plant crops for the mission. For instance in 1959, 25 hectares of forest were cut to plant rice and corn, while 5 hectares were parceled to fertilize them with cow manure so to cultivate yuca and corn.

The agriculture production was reported starting in 1960 and was mainly for the Mission consumption and often for the school children interns, whose lunch was subsidized by the State government. The production and diversity of the crops declined overtime (Table 4.6) and the mission kept promoting family *huertos* for vegetables while experimenting with chemical fertilizes which had poor results

Table 4.6 Kamarata mission agriculture production

	1960*	1962	1972
Corn	1,200kg		
Rice	14,000kg	2,100 kg	5,000kg
Sweet Yuca	10,000 kg		
Auyama	300 kg		
Quinchonchos	350 kg		
Watermelon	250 kg		

Note: In small scale were cultivated tomatoes, peppers, lettuce, papayas, green beans, black beans, cabbages, etc. **Source:** (GOV, 1960; GOV, 1962; GOV, 1972)

The mission did not discourage the shifting cultivation practices of the Kamaracoto but they did promote small gardens and *huertos* around their houses, and they even bought food from them, consuming part of it or allocating it to other mission centers or mining camps (see Table 4.7).¹⁰⁶

¹⁰⁶ Although the conuco practices of “tala y quema” were not discouraged, the Capuchin missions perceived such practice as detrimental to the environment and supported the C.V.G efforts of agriculture experiences in the savanna as a way to supply food to the Pemon and eliminate the conuco practice in favor of the conservation of natural resources (GOV, 1972).

Table 4.7 Indigenous Agriculture production bought by the Kamarata Mission

	1959		1962		1972	
	Kg	Bs.	Kg.	Bs.	Kg.	Bs.
Cassava	15,000		X		4,100	3,150
Corn	2,000		X		4,000	1,600
Vegetables, fruits	1,500		X		6,500	1,625
Rice			X		2,000	1,100
Black beans					700	1,050
Pork	3					
TOTAL				5,550		8,525

Source: (GOV, 1954; GOV, 1962; GOV, 1972)

X= reported as being bought but no figure amount indicated.

Cattle ranching seem to have been relatively successful (at least in the number of animals they had in their *hato*, (see Table 4.8) until the early 80's, selling cow and pig meat in Ciudad Bolivar and other places as well as to the Kamaracoto families. In 1972 two Kamaracoto families parceled land to raise cattle. The mission provided them with 10 cows and 1 bull with the condition that the families return the same amount of animals and keep the offspring as their property.

Casilda -a school teacher from Kamarata and Kamaracoto leader who lives in *Las Malocas* (Community adjacent to the Canaima resort)- explains that the enterprise declined when the Capuchin Father Victor Carvajal decided to transfer the management of the cattle to the Kamaracoto by dividing the herd among the families (5 to 10 cows to each family) in each community (Kamarata, Uruyen, Sta. Marta and others). The largest percentage of the herd was given to the Calcaño family for their management. This family is one of the oldest families that settled in the valley and has a long history of influential local and regional leaders. The head of the house was the local *Capitán* at the time and two of his sons were sent to Valencia in the late 70's to study agriculture and cattle rising. Consistent with Father Juan (Dominican missionary in charge of the mission

in 1996), the idea was that each family would return five cows to the Calcaños once they reproduce.

Table 4.8 Kamarata Mission animal ranching activities

	1953	1955	1959	1962	1971	1972
Cows	117	269	259	442	836	739
Horses and donkeys	5		5			
Pork	18	9	94	48	45	48
Chicken and hens	141	104				

Source: (GOV, 1954; GOV, 1955; GOV, 1959; GOV, 1962; GOV, 1972)

Casilda on the other hand explains that the arrangement with the mission was that the Calcaños would kill only two animals per month, half for the mission and the other to be sold to the community. This was later reduced to one per month until no animals were left. Dionisio –a schoolteacher in Kamarata- affirms that the Calcaño family commercialized with the herd and did not know how to manage it. Casilda further explains that the sons of the *Capitán* were supposed to return after their training and take care of the herd but their return overlaps with the establishment of the Kamaracoto tourist camp in the early 80's. Arcadio, one of the sons that returned decided to work in the administration of the camp. Since then, the herd disappeared due to mismanagement and consumption. Today only one family in Uruyen has been able to keep raising a small group of cattle for their consumption and to sell in the valley.

The main religious activities of the Mission were to celebrate mass each Sunday, baptize and confirm, promote matrimony and celebrate weddings and provide funeral services. By 1956 no formal education was provided by the Kamarata mission but some Kamaracoto were trained in construction, carpentry, mechanics, agriculture and taking care of animals (GOV, 1956). In 1958, the mission school *Dr. José Gregorio Hernández* started operating as a kindergarten with a capacity for 100 children. Two missionaries

served as teachers attending 92 children (50 males and 42 females). In 1960 the school covered up to second grade and two new schools started. A night school for adult's education for reading and writing with 10 students, and a weaving and cooking school for girls. In 1962, 64 children attended the main school, which started to operate as a semi-intern school with a small group of children, while 31 girls attended the weaving and cooking school. Subsequently in 1972 the school expanded to cover up to 6th grade. The teachers included 4 missionaries (3 sisters and a brother) and 2 *laicos* Bilingual Indigenous teachers. They taught 138 students (84 males and 54 females) including 25 interns (23 females and 2 males). Twelve students were sent to a boarding school in *Santa Elena de Uairén* close to the border with Brazil to continue their high school education (Ciclo Básico). The adult school continued operating teaching 25 adults (8 males and 17 females) and a new facility was built for adult women education including a workshop for making clothes and a school for female arts and crafts both domestic and indigenous (GOV, 1972). The unequal attendance of males and females to school was reflected in the level of literacy by gender that was 76,1% males and 47,7% females in 1972 (CONAHOTU, 1972).

A comparative study conducted by CONAHOTU in 1972 that included the communities of *Kavanayen*, *Kamarata*, *Canaima* and *Uriman* noted that for all the communities there were more males than females attending school. There was a tendency for desertion starting in 3rd grade for both genders. However, the tendency was larger for females given their migration to Ciudad Bolívar and other areas to work as domestic servants. In the case of males the desertion is attributed to their early incorporation in

paying jobs to support their family group. Only 2.3% of all children in school attended 6th grade and all of them were males.

By 1980, 400 children were registered in primary schools and 70 left the valley to continue their high school education in boarding schools in Upata, Santa Elena de Uairén, Apure and Caracas. Some of them studied in the *Escuela Normal* system to become teachers and others studied in special arts and technical schools. The latter include four men that went to a technical school in Valencia to study agriculture and cattle ranching with the purpose of introducing a modern agro-cattle system to Kamarata appropriate for the National Park and one that could substitute for the traditional *tala y quema* (conuco agriculture) (Valladares, 1980).

The Capuchin missionaries retired in 1990 handing over the Kamarata mission to the Dominican order because there were no Capuchin missionaries willing to settle in the valley. Father Juan (Dominican missionary in charge of the mission in 1996) explained that the Capuchin gave all the cattle left to the communities to avoid giving the Dominican the burden of its management. They even expected that once incorporated the Dominican would again organize the *hato*, the agriculture and cattle ranching activities. Father Juan argued that this was not the philosophy of the Dominican order, which focused on academic and religious discipline. The mission offered to train the Kamaracoto in arts, carpentry, electricity, etc., but the community declined. The community expressed an interest in a tourism school in which the mission declined arguing that tourism was neither their responsibility nor their area of expertise. Until 1996, the Kamarata mission was limited to education and religious services. A community dispensary with a resident doctor and a local nurse was operating

intermittently and the agriculture production in the mission was minimal with no cattle being raised. Father Juan in analyzing the current situation asserts that the cooperation of the community has diminished and the mission receives no recognition of their efforts. He explains that the mission is there only to facilitate but not to do the work for the community. By 1996 the government budget allocation for Missions had diminished significantly. The Kamarata mission and the missionaries in general were receiving Bs10,000 monthly that covered only the payment of the personal. It was not enough to pay for air transportation of goods and materials and airplane tickets making traditional activities of the mission prohibitive. In the same year a missionary quit and the loss of power of the mission can be reflected in the relocation of some elder Kamaracoto that left the core of their community to settle in the fringes, resembling the traditional Pemon settlement.

The importance of this section is to try to isolate the impact of the missions in the Pemon society. However, as (Thomas, 1982) states, this would require a special study to understand the differential impacts of the Capuchin and Adventist missions. Despite of this he offers the following conclusions:

Adventist efforts have seemingly produced more far-reaching changes in basic Pemon lifeways: Adventist communities are large, laid out in rectangular grid patterns with cleared streets; the native Pemon manioc beer (*cachiri*) is prohibited, as are certain kinds of fish and certain game animals; and adult males usually possess a Western-style suit, for use at Saturday religious services. The most important fact is, of course, that the friction and competition between Capuchins and Adventists have produced a deep rift in the society of their converts. The Adventist as a group, now have a tendency toward endogamy, and these communities appear to be moving away from traditional Pemon life at a more rapid rate than other segments of the population (p. 28).

The power of the missions and the relative absence of penetration by other forces of Venezuelan national society have meant that the Pemon have been subjected to external influences more Spanish than Venezuelan, more rooted in the tradition of the colonizing Capuchins of yesteryear than in the traditions of the modern nation-state (all the trappings of supply by air and radio contact notwithstanding). On the one hand, the Capuchins have been a kind of total institution, whose province is not only religion but also wage labor

and outside goods; on the other, they have provided a modicum of education and a buffer against the loss of land to other interests. The amount of land appropriated by the Capuchins for their mission buildings, fields, and herds is considerable, but it is certainly much less than that which would be taken up by land-hungry settlers (p.32).

The Capuchins themselves see their purpose as "civilizing and evangelizing" the Pemon as a means of "integrating" them into the national life. The Pemon, of course, are already part of the national life -they work for wages at the missions, work in the mines, buy Venezuelan goods, depend on axes, machetes, and the like for their very subsistence (p.33).

4.2.3 State intervention, Agriculture Extension and Mining.

The missions maintained a strong influence over indigenous people until the 1970's when the oil prices sharply increased and new national security and economic development interest emerged for the south of Venezuela. This was reflected in programs and projects such as the creation of CODESUR. This was a state agency developed to coordinate the development efforts toward the south. Large investments in the state iron and aluminum industries resulted in the construction of the first modern city of Ciudad Guayana in the Bolivar State. Since then, the Capuchin missions have gradually lost power and government support, while indigenous people have been gradually influenced by political economic factors linked to the expansion of the economic development frontier of the Venezuelan society. As the frontier is settled, extractive interests have expanded and established as has new development and conservation efforts, most of them planned overlapping indigenous territories.

Attempts to stimulate agricultural development were made during the 50's, 60's and 70's by the Missions and by the Venezuelan Corporation of Guayana (C.V.G).¹⁰⁷ Many of these "developments" were programs intended to consolidate and integrate (into the "criollo" national life) Pemon communities by intentionally influencing their culture

¹⁰⁷ Venezuelan Governmental Organization commissioned to preserve, develop and protect the Caroní river basin since 1974.

by changing their agricultural practices, which were considered inefficient and creating detrimental environmental consequences. The C.V.G launched several “integral conservation programs”, which included agriculture activities, forest exploitation, tree nurseries and horticulture, fire prevention and fire fighting programs. In the case of agriculture, the expectation was to transfer new agriculture technology to improve the conuco system for local economic development, so to reduce forest clearings and fires and protect the Caroní basin. New technologies and experimental crops were tested with poor results. Some soils responded well to commercial fertilizers, however, the costs of transportation of this input, limited its use at the scale that was needed. Likewise, *Cal* (dolomite) was used in large quantities in to balance the acidity of the soils proving to be effective but had the same limitations (CONAHOTU, 1974). The promotion of extensive modern agricultural practices in the Gran Sabana in the 80’s had similar limitations not only because of soil conditions, but also because of the high production costs, low productivity, and difficulties to commercialize the products. The principal problem for this failure was attributed to the lack of interest by the indigenous communities in the agricultural programs, and to the lack of a comprehensive frontier development program (with macroeconomics objectives, infrastructure, credit programs, commercialization, etc.) (C.V.G, 1987).

Very few data regarding economic and social change and environmental problems among the Pemon has been gathered. Urbina (1983) analyzed the process of social change and effects experienced by the Pemon-Arekuna in the north of the Gran Sabana. He studied the Arekuna historically from colonial times up to the seventies and tried to

determine the conditions and factors that contributed to the assimilation and subordination of the Arekuna people to the Venezuelan economy and social system.

Urbina linked the changes he observed to catholic mission activities since the thirties that managed a gradual process of “venezonalization,” setting the starting point of an assimilation process by imparting to the Arekuna a basic ideological background through teaching the Spanish language and basic education. Likewise, changes are attributed to the Venezuelan Government strategies to incorporate the Pemon to the regional development and control the frontier. Such strategies resulted in the presence of Venezuelan official agencies that progressively instituted a system of political control, services and agricultural development projects among other things. Urbina studied the effect of the changes arguing that they are:

A consequence of the economic penetration of cash economy into the traditional Pemon economy which is influencing the transformation of the traditional conditions of economic and social reproduction. At the same time, new conditions are created for the development of a new economy based on exchange values, which is completely different to the traditional economy based on subsistence activities (production of use value). This new economy is characterized by the production and circulation of commodities, which are starting to be part of Arekuna life. This makes the Arekuna to be subsumed within the circuit of commodities circulation which is characteristic of the national economy dominated by the capitalist mode of production (p.218-219).

The major impact that Urbina underline is the effect on the traditional social and economic conditions of reproduction, which is based on autonomous domestic units. This was represented by the reorganization of the domestic economic unit in both its internal and external relationships. At the internal level implied an adaptation to the new conditions and at the external meant conflict between sectors of domestic units with different access to lucrative activities. Moreover it meant stratification among the Arekuna society. Urbina foresee the potential decomposition of the traditional socio-

economic organization of the Pemon as contradictions surface from the conflicts between traditional and new conditions.

4.2.4 Mining

Both diamond and gold mining have been important economic activities that have impacted the Pemon, slowly catalyzing a monetarization process and facilitating the incorporation of the Pemon into the market economy. The history of mining started from the gold mining concessions in the late 19th century in the lower Caroní mainly for *criollos* and some foreigners as shown in the memoirs of the Ministry of the Interior. The history continues with small-scale or artisan mining in *bullas* (gold or diamond rushes or booms)¹⁰⁸ since the 1930's (e.g., 1932 Chicanán River; 1948 Abekri in Urimán; 1963-64 Carrao River; and Guacharaka in 1970) to the development of mining towns in the 50's and 60's (e.g., Icabarú). Since the 70's until today the history is of small mining cooperatives managed by both *criollos* and indigenous along side large scale private concessions of transnational mining companies (i.e., Placer Dome and Crystallex).

The Kamaracoto have been part of the mining history but less directly influenced than the Arekuna and Taurepan in the Gran Sabana. In the Kamarata Valley the Gran Sabana Commission in 1939 found gold alluvial deposits in all the creeks (*San –Uotó, Puruepán, Uairal* and *Meiboco*) headwaters of the *Aichá* River (Lopez, Delgado and Freeman, 1939). Two informants, Lino and Jose Manuel explained that from exploration trips to *Uapinao* (they do not specify who did this exploration) a gold *bulle* emerged in San Otó in the late 30's nearby *La Pinta* southwest of the valley. The bulle existed

¹⁰⁸ Thomas (1982) would describe the bulle as an ephemeral phenomenon that comes and goes when gold or diamond deposits are found, which can concentrate in a short period of time large temporary communities of miners of different nationalities and cultural background.

between 1935 and before the Gran Sabana Commission visit in 1939. It attracted large numbers of people from all ethnic groups such as Guaicas, Taurepan, Arecuna, Kokuikok, criollos and foreigners. The rush did not last long because the Kamaracoto asked the National Guard to intervene. At the time of Simpson's study of the Kamaracoto in 1939, there were few alluvial gold deposits and the exploitation was sporadic using criollo technology (wooden *batea*). He concluded that the mining at the time was insignificant but was important as a factor of contact with the outside world. In 1950 the Kamaracoto were involved in discovering diamond deposits in areas surrounding the *Avechi* and *Kaparé* rivers near *Uriman*, triggering a diamond bulla that attracted 4,000 miners (Villarrín, 1992). Conversely Lino tells me that the 1963-64 gold *bulla* developed in the Carrao River north of the Kamarata Valley called *Campo Carrao* created a crisis because many people migrated to work in mining abandoning their conucos and bringing hunger to the valley. In 1972 the Kamarata Mission reported that the diamond mining activities of the indigenous people had slowed down because new deposits were not found and the ones being exploited were drained. The total collected was 1,734 (does not indicate if its in grams or kilograms) for a value of Bs. 50,184 (\$11,405) (GOV, 1972).

Cousins (1991) carried out a formal study of the cultural impact of gold mining among the Pemon Arekuna in the community of *Las Claritas* located in the Imataca Forest Reserve 500 meters east of El Dorado – Sta. Elena road (Km. 88). He reviewed the history of mining over the last 30 years, which had supplanted almost all subsistence traditional horticulture, fishing and hunting practices. Cousins specifically studied how monetarization due to access to mining jobs opportunities undermined the authority of the

elders affecting father-in-law and son-in-law relationship within the domestic unit which is key to the Pemon economic and social organization (Urbina, 1983-84).

In 1989 in *Las Claritas*, 63% of the men worked exclusively in mining and other 5% combined mining with shifting cultivation. The majority of the women (61%) reported that they worked in the house, but they also participated occasionally, as did the children, in mining. Cousins observes the implications of this relation to the selection of a spouse and to the organization rules of post marital residency and son-in-law obligations to the father-in-law central to the formation of working groups and residence, as well for political alliances. Mining has provided young male Pemon certain independence and autonomy that allow them not to be in an inferior position socially and economically relative to the older men (Fathers and elder brothers) who tend to have control over women that are socially desirable to marry by tradition (cross-cousins). Cousins found that matrimony among cross cousins had significantly declined as well as the use of the traditional kinship terminology system.¹⁰⁹ Matrimony with no kin or distant kin relations was on the rise (56%) between the ages of 20 to 29 and matrimony with criollos remain around 22% between the ages of 20 to 49 years. This finding is linked to changes both in the lost of authority of the parents that used to obligate their daughter to marry their cousin and in parents attitudes that do not want their sons to marry their cousins. In addition, this change in patterns in the norms of matrimony is correlated with formal education¹¹⁰, which started with the foundation of the missions. However, Cousins reveals that although the data coincide with the arrivals of the missionaries, it is in the

¹⁰⁹ This contrasts sharply with the data collected by Urbina in kinship terminology in non-mining Arecuna neighborhoods.

last 20 years that the radical changes in the patterns he observed have emerged and this he infers is due to mining.

On the other hand, the traditional matriuxorical residence and post-marital service¹¹¹ remained current at the time of his research. Such form of the residence was found in 75% of the cases, in a slightly decreasing pattern, but in all age categories from 20 to above 60 years of age. This, Cousins affirms, demonstrates the persistence of the Pemon social organization. Cousins concludes that despite these changes -which he finds apparently not fundamental in the social organization- the Pemon Arecuna have shown resiliency against outside influences such as mission, State and mining activities. Moreover, he observes an ethnic Pemon reivindication and consolidation through political and mining organization Pan-Pemon that has allowed in the case of the Arecuna certain autonomy by self-managing mining enterprises.

4.3 The Kamarata Valley and the Pemon Kamaracoto

The Kamarata Valley is relatively flat and presents a scenic view typical of large and small open savannas with the presence of plateaus (Figure 4.4). The major river that runs and meanders through the valley in a south-north direction is the *Akanán River*, which is the main tributary of the *Carrao River* that spurs into the *Caroní River* northwest of the Auyantepüi. The *Aicha* and *Yuruán* rivers that form a watershed south end of the Kamarata valley drain the *Akanán*. The *Kuana River* also feeds the *Akanán* running through the *Akopán* and *Aparamán* system northeast of the valley (Lopez,

¹¹⁰ Cousins (1991: 167) note that the effect is between people that have had formal education (even if it is just one year) and those who have not. The number of years completed in formal education did not show any effect.

Delgado and Freeman, 1939). The valley is relatively isolated immersed in an extensive mountain and rainforest zone. The only way to get there is by foot through the old Indian, *balatá* and mission trails, by dugout boats by the *Akanán River* or by plane.

The Kamarata Valley is considered part of the same physiographic province as the Gran Sabana region, but its surface and elevation is much lower (Lopez, Delgado and Freeman, 1939).¹¹² It is a low valley formed by alluvial deposits and with deficient drainage (Martinez, Heredia and Rojas, n/d).¹¹³ According to (Guzman, 1986) the soils in the valley are a result of the evolution and transformation of the sedimentary rocks of the geological province of Roraima (1.6 to 1.7 billion years Pre-Cambrian period) that covers almost all the upper Caroní basin. The sandstone and quartzite of the Roraima province are irregularly spread over the metamorphic-igneous Guiana Shield basement and has suffered extreme erosion over millions of years shaping the tepüi formation.

The sandstone is shaped into a broken relief of altitudinal gradients intruded by diabase rocks,¹¹⁴ layered by a diversity of vegetation cover and impacted by a variation of climate. The landscape varies in elevation from 460m in the Kamarata Valley up to 2,400m asl on the top of the Auyantepüi showing a terrace like transition between landscapes. All this has resulted in a diversity of soils (Guzman, 1986). Guzman explains that the dominant soils in the valley are very acid (acid pH), shallow to moderate in depth, and of medium to thick texture with little pedogenetic development due to

¹¹¹ Cousins does not explore in-depth the post-marital service. His analysis about services to the father-in-law is mainly qualitative given the difficulty in quantifying such service in terms of working time, tasks to accomplish, years of service or in monetary terms (Cousins, 1991).

¹¹² Elevation of the valley ranges between 460 to 500 meters above sea level.

¹¹³ This type of valley is found only in 2% of a total 1.837.200 hectares that cover the Geomorphological Map Sheet NB 20-11 (Martinez, Heredia and Rojas, n/d). In other words is a scarce type of valley in this region.

rejuvenation, impoverishment and hydromorphic processes. Furthermore these soils are very deprived of nutrients due to poor mineral content of the base rocks impacted by extreme weathering and aging of the sediments.

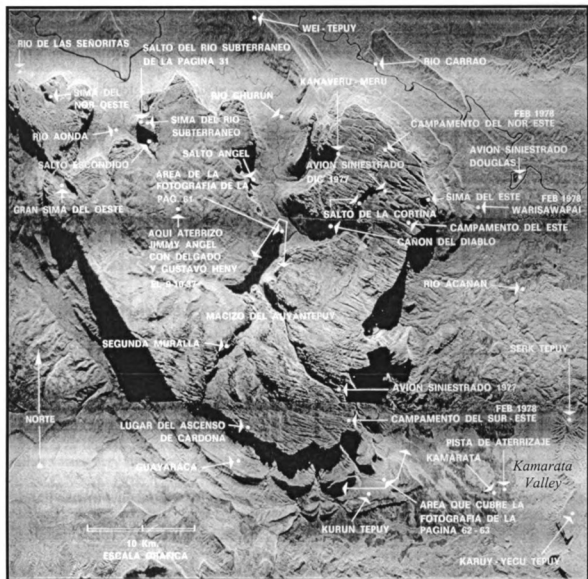


Figure 4.4 Radar image of the Auyantepui and the Kamarata Valley in (Brewer-Carias, 1978).

¹¹⁴ It is estimated that during Paleozoic and Mesozoic era magma frequently broke through the layer of sediments, emerging base rocks such as diabase and granites (Briceño, Schubert, & Paolini, 1990). See (Schubert and Huber, 1989) for an explanation of the evolution of the topography of the Gran Sabana.

Five orders of soils are found in the region mainly Oxisols, Ultisols, Entisols, Inceptisols and Histosols. The Ultisols and Oxisols in the valley are of extreme importance for the agriculture practices of the Pemon given their relative fertility. These types of soils develop in the upper Caroní mostly on basimontane and lower montane landscapes over small and large hills (“lomas” and “colinas”) that are a result of the intrusion of igneous rocks (diabase).¹¹⁵ Indeed shifting cultivation is commonly practiced in forests on Ultisols or Oxisols types of soils (Clark & Uhl, 1987). Both the Soil Map (John, Fuentes, Garcia, & Ramos, n/d) and the Geological Map (Salazar and Martinez, n/d) of the sheet NB 20-11 that cover an area of 1,837,200 hectares show that diabase intrusions are fairly common in the territory¹¹⁶ (10,8 % Ultisols soils) and highly concentrated in the Kamarata Valley on hill surfaces with slopes ranging from 16 to 60 degrees.

The bioclimate in the valley is of a sub-mesothermic temperature regime (mean annual temperatures between 24 and 18° C), and an ombrophilous rainfall pattern (average annual rainfall between 1,500 and 2,500 mm) typical of intermediate hill-lands and uplands of the Venezuelan Guayana (Huber, 1990). In fact, the temperature in the valley varies very little year round averaging 25.2 centigrade and has a considerable high rainfall pattern with an annual precipitation of 2,131.7 mm and an annual average precipitation of 177.6-mm (Tecmin, n/d). Only three consecutive months receive less than 100mm of rainfall from January to March while the highest precipitation concentrate between June and August (Figure 4.5).

¹¹⁵ Diabase sites tend to generate more fertile soils and are known to support shifting cultivation practices with cycles of 12-year fallow (Fölster, 1995).

¹¹⁶ The predominance of diabase outcrops encountered in the valley could be one of the variables explaining the high population concentration in the Kamarata valley.

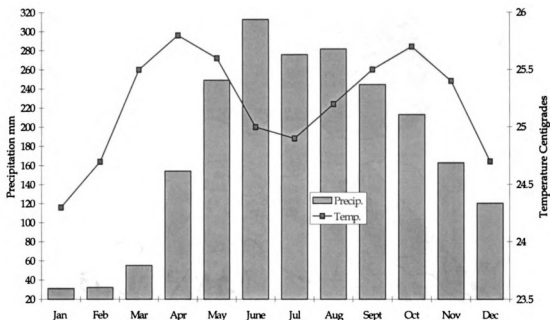


Figure 4.5 Average precipitation and temperature values for Kamarata between 1974–1986. Source: (Tecmin, n/d)

The altitudinal gradient in the valley also plays a role in the high diversity of vegetation cover as shown in figure 4.6. According to Huber and Rodriguez (1995) classification of the vegetation cover in the valley (Table 4.9).¹¹⁷ there are seven types of vegetation. This represents 6.8% of the vegetation formation types out of 102 described for the Venezuelan Guayana by Huber.

¹¹⁷ See Vegetation Map (Delgado, n/d) for a more detailed mapping of vegetation types in the Kamarata valley.

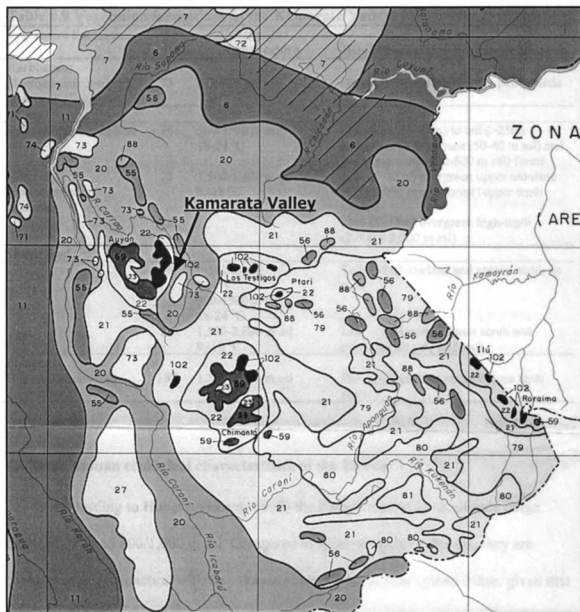


Figure 4.6 Portion of the Venezuelan Guayana Vegetation Map by Huber and Rodriguez (1995) showing the Gran Sabana Region and the Kamarata Valley.

Table 4.9 Vegetation formations in the Kamarata Valley

Vegetation Formation	#	Altitude / Temperature	Description Height/Phenology/Orographic zonation
Herbaceous			
Macrothermic lowland grassland (Savannas)	73	0-500 m asl >24 °C	Open savannas with riparian palm stands
Forest			
Submesothermic upland	20	500-1500 m asl 18-24 °C	Medium (15 - 25m) to tall (>25m) evergreen basimontane (50-40 m asl) and lower montane (400-800 m asl) forest
Meso and submicrothermic highlands	22	1,500-2,800 m asl 9 -18 °C	Low (5 -15m) evergreen upper montane (1500-2000 m asl) forest (upper tepüi slopes)
	23		Low (5 -15m) evergreen high-tepüi (2,000 – 3,000 m asl)
Shrub lands			
	55	0-500 m asl >24 °C	Tall (3-6m) lowland and upland scrub on rock
		500-1500 m asl 18-24 °C	
	59	1,500-2,800 m asl 9 -18 °C	Low (<3m) tepüi summit scrub and meadows on peat and rock
Pioneer			
Highland saxicolous ecosystem	102	1,500-2,800 m asl 9 -18 °C	Pioneer vegetation on sandstone tepüi summit

4.4 Some human ecological characteristics of the Pemon

According to Huber and Zent (1995) the Pemon inhabit in an altitude range between 300 and 800/1,000 m asl. Compared to other indigenous groups, they are considered in conjunction with the Akawaio Amerindians, true upland tribes, given that many of their communities are located in the Gran Sabana, between 800 and 1200 m asl. The Pemon live in settlements mostly in open savanna near rivers, and are highly dependent on the surrounding forest resources and rivers for their subsistence (Thomas, 1972). They have an extensive knowledge of forest resources and very good geographical

understanding of the savanna landscapes; however, according to Huber and Zent (1995) they do not use extensively the plants and flora of the savanna ecosystem.¹¹⁸

The Pemon have been traditionally small farmers (“*conuqueros*”, using the system of slash and burn for cultivation), hunters of birds and terrestrial mammals, fishermen, small-scale breeders of domestic animals, gatherers and traders¹¹⁹ (Simpson, 1940; Urbina, 1979; Urbina, 1983; Hernandez et al., 1994; Thomas, 1981; Butt-Colson, 1973; Thomas, 1973; Thomas, 1972). They have shown great adaptation to the strenuous and very limiting living conditions in the uplands even when compared to lowland areas. Although good soils are found linked to diabase outgrowth, the prevailing soils (developed from Precambrian Roraima formation) are known to be of low fertility inapt for intensive agricultural practices due to the substrate having little depth, poor nutrient contents and highly unfavorable chemical properties (Fölster, 1995). Game animals tend to be scattered in forest slopes and fish resources are scarce in black water rivers and difficult to gather because of small watercourses and commonly rapid currents (Huber and Zent, 1995; Fölster, 1995).

All these conditions provide limited land for productive and polycrops conucos, make short cropping cycles in conucos (forest clearings, swiddens), slow natural regeneration cycles of the forest, and inefficient hunting and fishing efforts (Huber and Zent, 1995). As altitude increases in the Venezuelan Guayana, life conditions become more adverse and the resilience of the ecosystem is lower. Indeed in the Gran Sabana uplands, soils depressed of nutrient reserves (nitrogen, phosphorous and potassium) limit

¹¹⁸ This is an open area for research and debate given that some research has (Hernandez et al., 1994; Salazar, 1995) shown a considerable amount of plants used by the Pemon.

greatly both the *conuco* practices by the Pemon, and the natural regeneration cycles of the local undisturbed forest (Fölster, 1986; Hernandez, 1987; Huber and Zent, 1995).

4.4.1 Social Organization of the Pemon: Settlement pattern and domestic and political organization

The Pemon are traditionally organized in neighborhoods (larger political territory unit) that are spatially fairly well defined often divided by small watercourses and other landmarks and in which regular inter settlement visits and other relations can be observed (Thomas, 1981; Morales and Arvelo-Jimenez, 1981). In general the traditional settlement pattern is attributed to an adaptation to the ecological constraints (i.e., limited areas for extensive agriculture, poor and acidic soils, limited resource availability) of the Gran Sabana environment (Urbina and Heinen, 1982; Thomas, 1972; Tarble, 1985). Also is attributed to specific group factors such as social organization, interethnic relations, trade, rituals, cosmovision, etc. (Tarble, 1985). However, actual dispersion pattern can easily be attributed to evolving historical social and economic conditions in the Gran Sabana region (Huber & Zent, 1995).

The neighborhoods are conformed by various proximate semi-permanent settlements mostly found in open savanna areas near and along small river courses (Urbina, 1983-84). The settlement seldom passes 40 to 60 inhabitants (Urbina, 1979; Urbina and Heinen, 1982).¹²⁰ Each settlement is a cluster of domestic units (rarely more than 10 dwellings) located close by in a common residential area. The domestic unit

¹¹⁹ See (Thomas, 1972; Butt-Colson, 1973; Coppens, 1971) for an extensive description and analysis of the trade network and spheres of exchange of the Pemon in the 70's. The Pemon were part of a strong system of regional interdependence (Arvelo-Jimenez, 1983; Arvelo-Jimenez & Biord, 1994).

¹²⁰ The parameter of 40 inhabitants was changed by Urbina (1983-84) stating that traditionally the settlement seldom passed over sixty individuals, dispersed in dwellings which rarely were more than ten. Large concentration of 45 to 60 people seemed to have been common as an influence of the *capitán* system that tended to gather large near kin groups (Thomas, 1972).

(production and consumption) consists of a cluster of households (individual dwellings) that normally hold one to mostly three nuclear families in one or two dwellings¹²¹ and are based on kinship and marriage relations (Urbina, 1983-84; Thomas, 1972). The domestic unit is integrated of spatially close relatives mainly conformed of spousal bonds, unmarried children, married daughters with spouse and their children and other siblings (Urbina and Heinen, 1982; Urbina, 1983-84). The head of the household is normally an elder man or a father in laws (Morales and Arvelo-Jimenez, 1981) but there are cases which women are considered head of the household. In other words the individual dwelling is an economic unit with its own production and conucos functioning within what (Urbina, 1982) calls a domestic compound.¹²² Urbina explains that:

The members of a dwelling can be considered as a basic economic unit subordinated to a bigger unit constituted by members of three generations and which shows a strong tendency towards matriuxorilocality. The members of this domestic unit are drawn from a bilateral extended family. The domestic unit also keeps common areas of gardens and its members strongly depend on each other to perform different activities (p.96).

Urbina further explains that in the domestic unit is where cooperation relations are the strongest where division of labor is clearly defined by sex with no specialization and the degree of participation is mediated by age (Urbina, 1982). Table 4.10 above is a comparative table showing such division between the Kamaracoto and the Arecuna according to Simpson and Urbina.

¹²¹ Thomas (1982) notes that two dwellings are quite rare for a single household.

¹²² Thomas only sees the nuclear family in a household as the as domestic unit, something that Urbina criticizes because he argues that Thomas failed to consider other factors in his definition of domestic unit beyond just people living in a dwelling. Urbina explains that he used two criteria's to defined the domestic unit: (a) people living together in a single dwelling or in a cluster of proximate dwellings and (b) those that work together in areas that have common gardens.

Table 4.10 Division of labor in the domestic group according to Simpson and Urbina

ACTIVITIES	(Simpson, 1940)		(Urbina, 1982)*	
	Male	Female	Male	Female
Shifting Cultivation				
Clearing of lightwood and high trees	+++		+++	
Burning and Clearing of burned wood			+++	
Planting	+		++	++
Weeding		+++		+++
Harvesting		+++		+++
Cassava processing		+++		
Peeling				+++
Grating				+++
Baking				+++
Kachiri making				+++
Fishing				
Hook and line	+++		++	++
"tapon" and "nasa"			++	++
Barbasco	+	++	++	++
Catching fish	+	++		
Hunting	+++		+++	
Manufacture of weapons	+++			
Gathering				
Fruits			+	+++
Mushrooms			+	+++
Insects			+	+++
Honey			++	++
Cooking		+++		+++
House building	+++		+++	
Canoe building			+++	
Basketry	+++		++	++
Wood work	+++		+++	
Pottery		+++		+++
Cotton work		+++		+++
Child care	+	++		+++
Manufacture musical instruments	++			
Manufacture of ropes and threads	+++			
Transportation of heavy loads	++	++		
Manufacture of alpargatas	+++			
Transport of construction materials	+	++		
Search for firewood and water		+++		
Accounting work		+++		

* +++ Predominantly or exclusively; ++ shared with one or more persons; + occasionally.

An adult man and a woman are considered a self-sufficient unit themselves and by combining their labor they accomplish all productive and reproductive household tasks (Riviere, 1984). Yet, there are tasks that require and depend on team efforts of males and females in the domestic unit. Urbina explain:

Commonly, the male team is composed of an old man with his adult single sons and sons in law and the female team by his wife and her daughters. In this sense, one of the main social and economic relationships is established between the head of the domestic unit and his son(s)-in-law who are his male helpers in the domestic unit (p. 81)

Moreover, the domestic unit is a unit of consumption and in where generalized principles of reciprocity depart which tend to be collectivistic (Urbina, 1982). The domestic unit as presented above is central to the analysis of this thesis.

By tradition the Pemon used a system of kinship terminology¹²³ and married preferentially their cross cousins,¹²⁴ keeping a matriuxorical post-marital residence. This meant that the recent married couples live in the house of the bride's parents until the couple move to a nearby residence after the first newborn within the range of the father in law (Cousins, 1991). The son-in-law is subject to postmarital service obligations¹²⁵ to the father in law and anthropologists consider this relation the most important relationship within the domestic unit and the basis of the economic and social configuration of the Pemon society (Urbina, 1982). The father-in-law and son-in-law relation is a cooperative one but mediated by the father-in-law. The son-in-law cooperates and

¹²³ Such system defines the class of possible spouses within the culture that in the cross-cousin case play a "functional endogamy" role.

¹²⁴ (Levi-Strauss, 1969) explains that the cross-cousin marriage is the simplest conceivable system of reciprocity and he considers it a basic system of exchange that stems from affinity relations and alliances.

¹²⁵ The service obligation is reinforced in the content of the Pemon myth as Simpson points out. Yet, Simpson in his study in Kamarata in 1939 affirms that this costume of providing services was abolished completely and that the son in law helped voluntarily and was not obligated to do so. This has not been the case in the studies of (Urbina, 1979; Urbina and Heinen, 1982; Thomas, 1982; Thomas, 1973; Cousins,

perform tasks such as working in clearing forest for the conucos of the father in law, construction and house repair, and other tasks that require a male working team which is considered a subunit of production within the domestic unit. The changes or breakdown of this subunit is key to understand changes in the Pemon shifting cultivation practices, which have environmental consequences.

4.4.2 Political organization: The Capitán system

The Pemon society is considered a horizontal and equalitarian society, given that there is no other groups that super ordinate to this unit (Thomas, 1972). Thomas (1982) affirms, that the Pemon do not have a unitary political organization and that is why he describes the Pemon society as one with order without government. Yet there is an authority or head in each settlement known traditionally as *teburu* (Simpson, 1940) or as is commonly named today *capitán*.¹²⁶ There is even a figure of *capitán general*,¹²⁷ which is the head authority that may cover several neighborhoods or region. The capitán is elected from among the elders head of households which themselves conform a council of elders (Morales and Arvelo-Jimenez, 1981). Again there have been cases more recently in which women have played the role as capitanes. Morales and Arvelo-Jimenez, (1981) describes the authority of the capitán as a *primus inter pares* mechanism that secures greatly the economic and political autonomy of the domestic groups. Simpson

1991). It is highly unlikely that the Kamarakoto had put an end to the service obligation at the time given its role in the Pemon social organization and the limited contact with outside influences.

¹²⁶ The name capitán to refer to a head of settlements probably came from the Mission decree of the Guayana Province in 1841 after the independence of Venezuela when capitanes residing locally would be in charge of “reduction and civilizing” areas performing all the duties of a circuit chief in the absence of a missionary that was the legal figure (Armellada, 1977).

¹²⁷ This figure seems to have generated in Kamarata in the 1930’s when the local *teburu*, Alejo Calcaño went to the regional authority to denounce the emergence of a *bullá* (gold rush) in the valley. The National Guard controlled the situation and gave Alejo the authority as the capitán general to maintain the order in the region. Also Alejo was given a gold mining concession of the area as a way to stop the rush.

(1939) compares the authority of the capitán over the various households to the *to-esa*’ (head of household) authority over the members of a household. Such authority he explains lie on “prestige, custom and consent more than on the force or any formulated legal base or religious theory or practice” (p.525). In Kamarata the capitán figure used to be held until the capitán died but since the death of Alejo Calcaño the leadership was first transferred to its elder son and relatively recently the leadership has been shared more frequently with other members. Certainly the capitán is part of the neighborhood but is an outstanding member, which requires skills. Part of the capitán role is to mediate between inter domestic unit conflict and serve as a counselor. Likewise to represent the neighborhood or region in relations or commercial transactions with other Pemon with no kin relation in the area, with other indigenous groups such as the Ye’kuana, Makuxi and Akawaio as well as with non-indigenous people (Thomas, 1982; Morales and Arvelo-Jimenez, 1981; Thomas, 1972). Another important role is holding the elder council and community meetings in which many of the problems that the neighborhoods or region is facing are discussed. Many if not all-major decisions that affect community life are made in these meetings. Such meetings keep the neighborhood informed and somehow coordinated and in my opinion serves as a mechanism of social control where everybody knows what is going on. In representing the region effectively in the face of outsiders it requires to be able to speak at least Spanish, have negotiation skills, knowledge of what is being exchanged and how this system of exchange function. For instance, the first capitán in Kamarata was one of the few that spoke Spanish in the region and had the opportunity to live in Caracas. As far as the issues dealt by the capitán and the elder’s council was kept local or regional, the capitán played an important role within the nature of the

Pemon society. However, the issues are not any more local and there is pressure over the political indigenous organization and the capitán system would need to adapt or simply will disappear. Morales and Arvelo argue, that the authority and power of such organization is linked to the extended families and this impedes the monopolization, stratification and dependency in a centralized political power. Instead facilitates a decentralized indigenous political organization, which is the base for a direct democracy.

The capitán system was very much in place in 1996 in the Kamarata Valley with a capitán general and as many capitanes as neighborhoods. Nonetheless, the system is changing due to changes in the Kamaracoto society and the emergence of new leaders, which will be discussed in the section of tourism impacts. Likewise it will be discussed the organization of the local indigenous tourism enterprise (ACKY) as a community enterprise, generating conflicts among domestic units and competing with the authority of the capitán system.

The aspects of the Pemon social organization reviewed above seem to be very much in place in the Kamarata Valley despite years of mission activities. The conditions are similar to the ones found by Urbina in the Arekuna territory in the early 80's but the new influences are not government development projects (i.e., agriculture extension programs) but the presence of the national park and emerging ecotourism development. Yet, in many other Pemon neighborhoods aspects of their social organization are fading specially in those areas being integrated into the market economy such as the mining case study by Cousins (1991) discussed previously.

4.4.3. Shifting Cultivation as practiced by the Pemon

Shifting cultivation (conuco) is the agricultural system most important and most used by the Pemon communities in the Gran Sabana. Its importance is reflected in the number of conucos and the land surface allocated by the Pemon for such practices. Shifting cultivation starts with selecting a specific site in the forest for clearing. In selecting a new site (primary forest), the Pemon check the soil.¹²⁸ Some communities prefer yellow soils, which are loose (sandy), deep, without rocks and with good drainage (Azuafe, 1991). Other Pemon communities prefer humid and clayey soils, or clayey-sandy soils, mostly dark red with neither rocks nor roots (Urbina, 1979).¹²⁹ However, in general the Pemon prefer to work in fallow plots,¹³⁰ which they have a sense of ownership, passing the right to use them from generation to generation (Azuafe, 1991). Once the site is chosen, shrubs and small trees are cut followed by the cut of the larger trees. These disturbances are considered small scale (Uhl et al., 1990) varying from 300 m² to 11,000 m² (Urbina, 1979; Azuafe, 1991). The Pemon make incisions or several small cuts to the large trees with small diameters, so when they cut the largest trees with the widest diameter, these drag down the former when they fall. The cuts of the trees are made in a way that they fall toward the center of the plot.¹³¹ This is an efficient way to clear the plot with basic tools. This work is done between November and January, and the

¹²⁸ In Kamarata shifting cultivation is mostly practiced in the basimontane and low montane landscapes mainly in "lomas" and colinas" where ultisols and oxisols are found. Some cultivate in the valley in forests found in the sabana "terrazas" where ultisols are also found and in gallery forests along waterbodies in "vega" (Guzman, 1986).

¹²⁹ Pemon from other settlements test the suitability of a site by tasting the soil. If it's acid, the soil is inappropriate for planting, and if it's sweet the site is adequate for the conuco. In another community, locals recognize a suitable site by observing the roots of certain plants in the forest. Thick roots mean that the land is fertile, and if the roots are thin, the land is unproductive (Rodriguez, 1981).

¹³⁰ This has been observed in other places. It is more efficient to cut and prepare secondary forest than primary forest without necessarily losing productivity (Gomez-Pompa and Kaus, 1990).

¹³¹ This is done so the fire is controlled from advancing to the adjacent forest when is time to burn the plot. In some cases even a space around the conuco is cleared to prevent fire from spreading (Rodriguez, 1981).

men in the community exclusively do it. Commonly the cut of the forest is done individually, but in many cases is done collectively with the help of family members or in cooperation with the owners of adjacent plots.¹³² The branches of the fallen trees are cut and are left so they can dry for a couple of months (Urbina, 1979). Between mid-March and early May, the plot is burned, beginning at the periphery of the plot in a circular way. The material that is left after the burning is grouped and burned again. The ash from burning the biomass in the plot not only decreases soil acidity (Fölster, 1995) but also enriches the soils that are poor in nutrients allowing farmers establish annual and short-cycle cropping (Park, 1992). The preparation of the soil and the seeding or planting is done simultaneously during the month of May and June.¹³³ The Pleiades stars orient this activity when they appear west in the horizon. When these stars are in position they coincide with the initiation of the rainy season (Azuaje, 1991). The Pemon as many other cultures in the tropics, have polycultural plots. They cultivate bitter (*Manihot sp.*), and sweet manioc as diet staples, pineapple (*Ananas satibus*), batata (*Ipomoea batata*), ñame (*Dioscorea alata*), mapuey (*Dioscorea tryphylla*), ají (*Capsicum silvestre*), auyama (*Cucurbita moschata*), papaya, watermelon, beans and cotton; and in the lower part of the conuco (the most humid area of the plot) they cultivate plantains, bananas (*Musa sp.*), ocumo (*Xanthosoma sagittifolium*), and sugar cane (Urbina, 1979; Azuaje, 1991). The Pemon plant maize the first year interplanted with manioc (yuca) on very fertile soils that have diabase outcrops (Azuaje, 1991). Once the planting is done, the conuco activities rely on the women, especially when preparing “casabe” and “kachiri”.¹³⁴

¹³² It takes two men 10 to 15 working days to clear half of a hectare of forest (Urbina, 1979).

¹³³ Planting requires 15 working days (half an hectare) with the participation of family members (Urbina, 1979).

¹³⁴ Fermented beer like drink based on yuca and batata.

The conuco system of the Pemon requires that they protect the vegetation cover of the soil. This is why they leave the land covered with branches and litter when they cut the trees, protecting the ground from being degraded by exposure to direct sunlight (irradiation), washed by the rain or eroded by the wind. The soil is only exposed to these erosional forces in the foundation year of preparation and planting of the conuco. After that the conuco resembles in a small scale the vegetation strata of the tropical forest. First, the manioc plants (*Manihot sp.* the tallest in the conuco) are arranged, then the intermediate vegetation, represented by the ocumo (*Xanthosoma sagittifolium*), and finally the low dragging vegetation such as the *auyama* (*Cucurbita moschata*). Again this protects also the soil and the conuco from irradiation and leaching (Rodriguez, 1981).

As in other shifting cultivation systems, while the site is being actively cultivated, it must be weeded two to three times a year¹³⁵ to prevent second-growth vegetation from taking over (Urbina, 1979; Uhl et al, 1990). Each family has in general three conucos, one of two years old, one of one year old and the new conuco (Urbina, 1979; Azuaje, 1991). If the soil is good and the crops have grown well in the plot, a new conuco is built adjacent to it and so on. The conuco is used for two or three years and then is abandoned and left to rest when the productivity decreases as the nutrient base is depleted¹³⁶ (Uhl et al., 1990; Park, 1992). Also they are to fallow when the conucos are difficult to keep clean because weeds and pioneer plants have already invaded and a secondary succession starts leading to a natural recuperation of the forest cover in the area (Park, 1992). The fallow period needed to restore soil fertility varies between 5 to 15 years (Azuaje, 1991), 15 years or more (Dufour, 1990; Rodriguez, 1981), 20 to 25 years (Zent, 1995), and in

¹³⁵ This takes two to three working days (2 people/half hectare) each three months per year (Urbina, 1979).

very poor soils 50 to 100 years (Fölster, 1986). This period depends on the capacity of the forest to regenerate (vitality of the woody fallow), the intensity of use and the population pressure. According to (Park, 1992) the fallow period plays an important role in restoring the forest ecosystem. He explains that “the vegetation that grows in the fallow period has a higher biomass and holds a larger and more complete stock of nutrients than the vegetation planted for crops. It also offers much better protection against soil erosion” (p. 48). The key function of the fallow period is the suppression of weeds, the restoration of equilibrium humus content, and the accumulation of nutrients to be used in the next cultivation phase (Fölster, 1995). The next cultivation of the fallow (without jeopardizing the sustainability of the conuco system) is more a function of the biomass accumulated than the age of the fallow (Fölster, 1995).

The ecological success of the conuco is based on the small-scale disturbance of the forest (similar to the natural gaps due to a tree falling in the forest) with short period of cropping and long periods of fallow (Dufuor, 1990). The key is taking advantage of the natural regeneration capacity of the forest as the central element in the production system. Small slash and burn plots over a dispersed area in forests create a mosaic of vegetation with different succession phases. Zent (1995) believes that shifting cultivation as a rotative system is considered an intermediate disturbance of the tropical forest that contributes to biological diversity and high productivity levels. An intermediate disturbance creates a variety of habitats and interrupts the competitive exclusion process for the most adapted species, allowing for more diversity. In terms of productivity, secondary vegetation has a metabolic and biological productivity greater than primary

¹³⁶ Azuaje (1991) reports that yields he observed for manioc: 20 to 30 ton/ha in the first year of cultivation, 10 to 15 ton/ha in the second year and the third year, the production was below 5 ton/ha.

vegetation. Pioneer and secondary plants are characterized by the constant and prolific production of seeds, a greater density of fruits and leaves that are more palatable, factors favorable for herbivores and seed dispersers.

4.4.4. Destabilizing factors of shifting cultivation among the Pemon

Fölster (1995) defines “stable” as related to ecosystems, as the capacity of a particular system to return to the original situation, or at least a similar one, after a disturbing event. To this concept another kind but highly related “social/ cultural stability” is necessary to be taken into consideration. That is the continuous traditional resource relation that local indigenous practice that guarantee such ecological stability. This means to keep the fragile balance between exploitation of resources and the natural regeneration of the forest, which is ingrained into the practices of traditional indigenous farmers. Once this balance is lost, so too the basis of sustainability (Park, 1992). This is not to say that the Pemon culture needs to stay unchanged forever and that they need to be isolated from the rest of society to warrant stable ecosystems. It is unquestionable that cultures evolve and it is impossible to isolate any ethnic group. The point here is that if we recognize that traditional resource relation practices of indigenous people guarantee ecological stability, then the factors that lead to changes in these practices need to be analyzed to render engrained solutions to environmental change linked to human causes.

Many are the factors influencing the Pemon society within Canaima that is changing its balanced resource relation with the Gran Sabana environment. In order to maintain the ecological/ social and cultural stability relation, several conditions need to be maintained:

- The population size, density and structure of indigenous ethnic groups are fairly constant within the area of their traditional lands. (Huber and Zent, 1995; Anderson, 1991; Fölster, 1995; Park, 1992).
- External factors do not impact significantly the traditional life styles of indigenous communities (Huber and Zent, 1995).
- Exploitation of natural resources is mainly for subsistence economy (Huber and Zent, 1995).
- Sufficient availability of forest for shifting cultivation (Park, 1992).
- Low intensity in the level of interference of the ecological system being used or exploited (Fölster, 1995).

These basic conditions have been changing in the Pemon society. Natural environmental conditions and historical political, social and economic factors have played an important role in the changing of the mentioned basic conditions. Factors such as missionization, education systems designed for the *criollo* national life, agricultural development projects and new paying jobs opportunities have influenced the lifestyle of many Pemon communities with adverse impacts for their surrounding environment. The knowledge of the natural resources, the practice of sustainable shifting cultivation and the responsible use of fire by indigenous people is being lost from generation to generation given the acculturation process influencing local settlements. As observed in the census data, the Pemon are experiencing internal migration and a pattern of concentrating in large population centers presenting overtime a nucleation process that has increased the human pressure on the Gran Sabana environment in the last 60 years. Indeed the breakdown of shifting cultivation is most critical and evident, when nucleation and sedentariness of population centers occurs and when availability of diabase sites and forest for shifting cultivation is limited. Fölster (1995) explain that in populated centers:

People have moved from diabase sites to poor soil sites. This change implied giving up a site where a great variety of crops could be grown (apart from manioc also beans, sweet potato, even maize, plantain and citrus), to sites capable of producing almost exclusively manioc. I have been told that one needs to cultivate 4 to 6 times more land of the latter type to produce the necessary manioc for a family than on the former. More land also means more work (p.69).

Another issue related to the Pemon moving their conuco from a diabase site to poorer soil is that many tend to replicate long cultivation cycles that are not adequate for less fertile soils (Fölster, 1995). Likewise, this may imply short fallow period's practices in soils that may require longer fallow periods.

On the other hand, many settlements have experienced a decrease in forest availability caused whether by migration to areas without forests (e.g., along the Gran Sabana road), population is increasing and getting more sedentary, or more forests are lost to fires. It has been estimated that 0,35% of the forest and shrubs in the Gran Sabana are affected by fires every year without considering new unexpected periods of critical droughts (Romero, 1992). This has forced the Pemon in many settlements to overexploit the already existing conucos (extending the cultivation period above 2 years), and to increase the area of their conucos and/or to begin to reduce the fallow period of secondary forests (Fölster, 1986). This affects the stability of the conuco system which depend on a vital woody fallow which have the functions of suppressing weeds, restoring the humus content of the soil and storing nutrients for the subsequent cultivation phase (Fölster, 1995). In an unstable conuco system regeneration becomes very poor and thin, grasses and weeds colonize, and the farmer turns to burning. Soon the mature forest degrades to a shrub savanna, which contains low nutrient capabilities to maintain even a seasonal crop (Fölster, 1986). The result is population concentration centers with

degrading nearby lands and decreasing agriculture production potential and subsequently food sources for the local people.

Regarding game, nucleated settlements have already experienced depletion of nearby animals which seem to incite intensified hunting efforts¹³⁷ including the use of fire to induce fresh graze and uncover game (Gorzula and Medina-Cuervo, 1986; Huber and Zent, 1995). This pressure in the environment is expected to continue given the momentum of the changes in the Pemon society.

4.5 Demographic characteristics of the communities in the Kamarata valley

The Kamarata Valley has an estimated population of 2,101 indigenous people for 1996.¹³⁸ The population has increased seven fold since the visit of Simpson in 1939 when he estimated 300 inhabitants in the valley. The population increased to 516 in 1964, 10 years after the establishment of the Kamarata mission in 1954 and two years after the creation of the park. Subsequently the population grew sharply doubling in 1972 by reaching 1,500 inhabitants and then to 2,101 in 1996 (Figure 4.7).¹³⁹

Given that the Kamarata Valley has a land surface area of approximately 750km², the density of the population is of 2.8 inhabitants per square kilometer. According to these estimations, the Kamarata Valley has the highest concentration of indigenous people in the park holding 26% of the entire indigenous population in 2.5 % of the total

¹³⁷ This observation warrants further human ecology research into Pemon hunting practices and responses to game fluctuations.

¹³⁸ This data is based on the present study census that recorded 1,278 inhabitants. The other 823 people was based on the birth certificate census of the Kamarata Mission carried out in 1995 which allowed to verify the name of the people interviewed and include those that were missing. Similar estimation was done in regard to the number of households.

¹³⁹ The lack of consistency in data collection method and names for the communities in the different census found in the literature (1939, 1961, 1971, 1982 and 1992) makes impossible a proper analysis.

land surface.¹⁴⁰ The population is distributed in 21 neighborhoods,¹⁴¹ comprised in approximately 328 households.¹⁴²

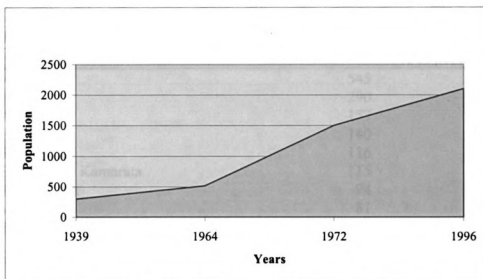


Figure 4.7 Kamarata Valley population growth overtime. Source: (Simpson, 1940; Villarrín, 1992; CONAHOTU, 1972; Medina, 1998)

Table 4.11 below shows the study area population divided by neighborhoods. The majority of the population (69.3%) concentrates in seven neighborhoods specifically Kamarata (25.9%), Kovipa (13.8%), Awaraparú (7.5%), Kuana (6.7%), Sarauraipa (5.5%), San José (5.5%) and Santa Marta (4.5%). This concentration more than mere traditional territorial divisions, is attributed to environmental and historical social factors. The former factors include the availability of agricultural land for shifting cultivation due to diabase base soils, the existence of a savanna ecosystem, which is scarce in the region and the relative abundance of fish and game. The latter factor includes the “refuge”

¹⁴⁰ In 1972 the population in the Kamarata valley was estimated at 1,500 people, representing 30% of the total indigenous inhabitants in the park, which was estimated at the time to be 5,000 inhabitants (CONAHOTU, 1974). This was before the expansion of the park to its current size in 1975.

¹⁴¹ Kamarata, Kovipa, San José, Santa Marta, Atapa, Wapinao, Uruyen, Kavak, La Vigía, Põirepa, Múnatapo, Avasakapan, Santa Rosa, Epõ:kün, Coso'rupo, Wüypa and La Pinta.

explanation of migration, the establishment of the Capuchin Mission in Kamarata, primary and secondary school opportunities, health, water and electricity services, an airport and a Adventist and *Hallelujah* churches (e.g., mostly in Kovipa).

Table 4.11 Study area population in 1996 by neighborhood

	Population	% of population
Kamarata	545	25.9
Kovipa	290	13.8
Awaraparu	157	7.5
Kuana	140	6.7
Sarauraipa	116	5.5
San José de Kamarata	115	5.5
Santa Marta	94	4.5
Wadetöi	81	3.9
Atapa	51	2.4
Uruyen	31	1.5
Pöirepa	29	1.4
Wapinao	27	1.3
Münatapo	25	1.2
Kavak	16	0.8
La Vigia	11	0.5
Wüypa	10	0.5
La Pinta	9	0.4
Epö:kün	8	0.4
Coso'rü'po	6	0.3
Santa Rosa	6	0.3
Avasakapan	5	0.2
Missing	329	15.7
TOTAL	2,101	

The Kamaracotos have for 1996 an estimated crude rate of natural increase (RONI) of 37.3 (Table 4.12) or 3.73 % per year (37.3 per 1,000 population). At this rate, the population in the valley wills double each 18.8 years,¹⁴³ with a rate slightly slower (0.9% less) than the rate of the park, but 2% faster than the rate for the Gran Sabana Municipium. If, instead of estimating the total death, take the death rate (4.3) statistics

¹⁴²The total of households included in the census was 200. The other 128 was estimated based on the

from the State of Bolivar (MF, 1994) we have a different RONI of 42.7 (CBR= 46.7 – CDR= 4.0) or 4.27% per year (47.7 per 1,000 population). At this rate, the population in the valley will double in 16.4 years, a rate close to that of the park.

Table 4.12 Kamarata Valley 1996 Crude Rate of Natural Increase

Index level	Parameter
Total Birth	50
Total Death	10*
Mid-year population (MYP) ¹⁴⁴	1071
Crude Birth Rate ¹⁴⁵	46.7
Crude Death Rate	9.3
RONI (CBR-CDR)	37.3
70/RONI	18.8

*= Estimated.

This indicates that the park is concentrating indigenous population especially in an area where indigenous people feel somehow protected. Yet, some would argue that the fastest concentration seems to be along the road to Santa Elena, which is more accessible and job opportunities are greater and more diverse.

4.5.1 Population Age-Sex Structure and age-specific sex ratio

The population age structure in the valley includes 51% of children under the age of 15 (see Figure 4.8 and Table 4.13), which is typical of populations with a RONI exceeding 4.5 % per year (Hern, 1995). Although the rate of natural increase of the

average amount of inhabitants per household (6.49 +/- SD 3.09).

¹⁴³ Doubling time is estimated applying the general rule of dividing 70 by RONI.

¹⁴⁴ Mid-year population is calculated by adding the total of individual born alive to the total population count of the census; subtracting the number of individuals that died; adding the number of people who immigrated; subtract those who emigrated; and divide by two (Hern, 1995). In this calculation given the lack of data, the total death was estimated and it was assumed that immigration and emigration was zero.

¹⁴⁵ CBR (Crude birth rate) is calculated by dividing number of live births by the mid-year population, per 1,000 people. CDR (Crude death rate) is calculated by dividing number of deaths by the mid-year population, per 1,000 people. RONI is estimated subtracting CDR from CBR (Hern, 1995).

Kamaracoto population does not exceed 4.5% per year, its population is very young, growing steadily and with a mid to high fertile population.

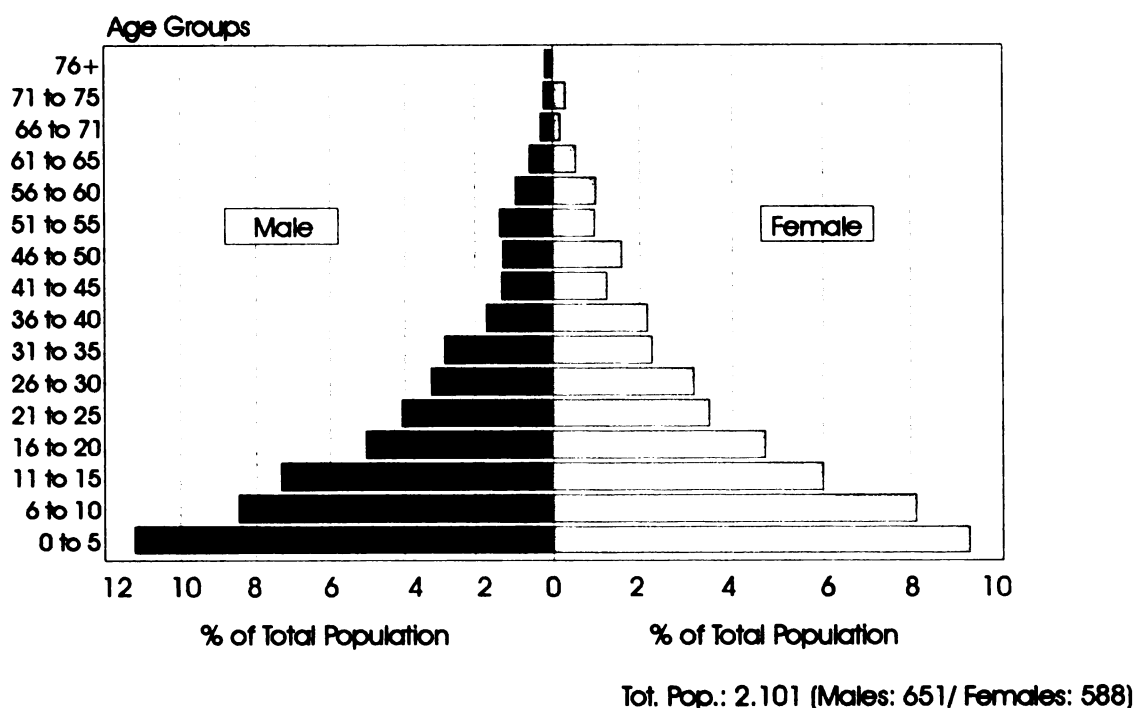


Figure 4.8 Kamarata Valley Population Structure by age and gender in 1996

From the population pyramid is hard to observe, but the overall sex ratio shows a slight imbalance between males and females, that is 111 males per 100 females (see Table 4.13). The sex ratio at birth (0 to 5 years of age) is 123 males per 100 females, which may indicate a high female infant mortality. This imbalance seems to move downward at later ages but still remain in almost all age cohorts indicating migration of women out of the valley as well as a high birth mortality rate.

If we look at the Kamarata community alone that has comparable tables of age structure of population by sex for 1961, 1972 and 1996 (see Appendix 4.2) we can observe important changes overtime in the structure. For instance in 1961, seven years

after the creation of the mission, the Kamaracoto population was 596 with an overall sex ratio of 87.4, a similar ratio at birth but much smaller between the 10 – 24 age cohort. By 1972, the population in the community was 298 with a balanced 105 sex ratio but with a birth ratio of 121.6 and a greater disproportion in the 11 to 20, 31 to 35 and 41 to 45 age cohorts. Without discarding the possible data gathering problems between the 1961 and 1972 census, the data probably reflects a significant migration of women out of the valley, which may explain the decrease in the population.

Table 4.13 Kamarata Valley Population Composition by Age and Gender 1996

Age	Both Sexes	% Tot. Pop.	Male No.	Fem. No.	% Males	% Females	Sex Ratio
0-5	265	20.7	146	119	22.4	20.2	122.7
6-10	214	16.7	108	106	16.6	18.0	101.9
11-15	173	13.5	94	79	14.4	13.4	119.0
16-20	126	9.9	65	61	10.0	10.4	106.6
21-25	99	7.7	53	46	8.1	7.8	115.2
26-30	83	6.5	42	41	6.5	7.0	102.4
31-35	66	5.2	37	29	5.7	4.9	127.6
36-40	51	4.0	23	28	3.5	4.8	82.1
41-45	34	2.7	18	16	2.8	2.7	112.5
46-50	38	3.0	17	21	2.6	3.6	81.0
51-55	32	2.5	18	14	2.8	2.4	128.6
56-60	26	2.0	13	13	2.0	2.2	100.0
61-65	16	1.3	8	8	1.2	1.4	100.0
66-70	7	0.5	4	3	0.6	0.5	133.3
71-75	7	0.5	3	4	0.5	0.7	75.0
76 + yrs.	2	0.2	2	0	0.3	0.0	
Missing	39	3.1				0.0	
All Ages	1278	100.0	651	588	100.0	100.0	1.1

This female migration was mainly to Ciudad Bolivar and Caracas for job opportunities largely maid services. In 1996 the population increases to 534, it is aging with males and females reaching the ages 71 to 75 and with an overall balanced sex ratio. However the ratio at birth is much larger (138.3) and even larger in the 16 to 20-age cohort. This structure changes between the 36 to 50 cohorts probably reflecting male

migration. The major known male migration motive outside the valley is for tourism jobs opportunities.

In the valley the productive labor population (between 16 and 65 yr.) corresponds to 44.7% of the population, establishing a high dependency ratio of 117 people for every 100 economically active person in the valley.¹⁴⁶ This would be considered very high and typical of poor developed areas with fewer productive people. However, this ratio does not reflect the true economically active population given that children 15 and under and adults over 65 yr. are active during the year in subsistence economic activities such as shifting cultivation and fishing.

Just analyzing the Kamarata community alone the dependency ratio overtime (see Table 4.14) has varied somewhat accentuated in 1972 by an increase in proportion of the population less than 16 years but returning in 1996 slightly lower to the values of 1961. In general over a 35-year period, the dependency ratio has remained and there is no major population structure change other than an increase in population size, aging and women migration.

Table 4.14 Dependency ratio in the Kamarata community by years

Community	Years	Under 16	16-65	66 and over	Dependency ratio
Kamarata	1961*	52.5	45.5	2	119.9
	1972	57.4	42.6	0	134.6
	1996	53.4	45.3	1.3	118.3

*= The data for 1961 had different cutting points under 15, 15-64, and 65 and over.

Table 4.15 shows demographic indices of the population in the Kamarata Valley compared with the high and low demographic boundaries defined by Hern (1995). For all

¹⁴⁶ Dependency ratio is the number of persons in a population who are not economically active for every 100 economically active persons in a given population (Pollard, 1990).

the parameters the Kamaracoto are around the mid-range. The General Fertility Rate (GFR)¹⁴⁷ in the valley for 1996 was 0.205 meaning that less than one live birth per year for every two women of reproductive age for the period. The total fertility rate (TFR)¹⁴⁸ is 6.1 births per women and the Gross reproduction rate¹⁴⁹ is 2.7 female births per women.

Table 4.15 Kamarata Valley demographic variables and some high and low boundaries for each variable

	High ^a	Kamarata valley	Low ^a
Sex ratio (males/female)	1.4	1.1	0.8
Crude birth rate (CBR)	60/1,000	46.7/1,000	5/1,000
Crude death rate (CBR)	30/1,000	9.3/1,000	3/1,000
Rate of Natural Increase (RONI)	49/1,000 (4.9%)	37.3/1,000 (3.7%)	1/1,000 (0.1%)
General fertility rate (GFR)	0.305	.205	0.088
Total fertility rate (TFR)	9.935	6.074	2.573
Gross reproduction rate (GRR)	4.933	2.653	1.255
Doubling pop. time 70/RONI	14.3yrs	18.8yrs	

^a(Hern, 1995).

Table 4.16 and figure 4.9 below show the GFR adjusted for age distributions showing a young, mid to high natural fertile population peaking in the 30 to 34 cohort and extending in to the mid forties age of reproduction.

The intention of this minimum demographic data is to observe any important demographic fact about the Kamarata Valley population and to be able to compare it with similar groups and analyze any changes overtime in future studies.

¹⁴⁷ Number of live births during the census year divided by the number of females aged 15 to 49 (Hern, 1995).

¹⁴⁸ Defined as the average number of children that would be born alive to a woman during her lifetime if she were to pass through all her childbearing years conforming to the age specific fertility rates of a given year (Haupt and Kane in Yaukey (1985)).

¹⁴⁹ It is the same as TFR but only count female babies. This measure is considered standard and most reliable measures of group fertility (Hern, 1995). Represents the average number of daughters, which

Table 4.16 Age-specific birth rates, birth rates and female birth rates, all neighborhoods in the Kamarata Valley in 1996

	<i>Women</i>	<i>Male</i>	<i>Female</i>	<i>Total Births</i>	<i>Birth Rate</i>	<i>Female Birth Rate</i>
15-19	58	4	6	10	0.172	0.103
20-24	49	7	8	15	0.306	0.163
25-29	34	4	2	6	0.176	0.059
30-34	42	7	7	14	0.333	0.167
35-39	26	2	1	3	0.115	0.038
40-44	18	2		2	0.111	0.000
45-49	17	0	0	0	0.000	0.000
Total	244	26	24	50	1.215	0.531
GFR= .205					TFR*5=	6.1
					GRR*5=	2.7

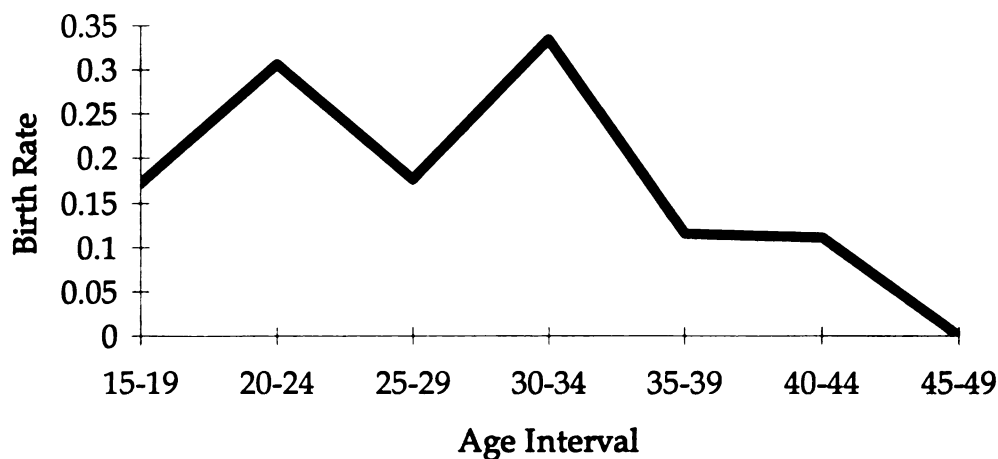


Figure 4.9 Age-specific birth rates, all women in Kamarata Valley 1996

4.5.2 Dwellings

Data collected on 200 dwellings in the valley show that 66% were reported to be located within their communities while 34% were in another place outside their perceived communities. The transformation of the traditional houses (known today as *malocas* or

ignoring mortality, will replace their mothers, assuming that the rates for the current year continue forever (Pollard, Yusuf and Pollard, 1990).

churuatas) of the Kamaracoto is evident. Changes are significant regarding dwelling construction materials in the valley showing the impact of outside influence, but the use of traditional materials remain strong. The majority (57.5%) of heads of households reported to live in houses compared to 35% that reported living under traditional houses.¹⁵⁰

It is interesting is to note that 93.9% of these non-traditional houses are found in the neighborhoods of Kamarata (51.3%), Kovipa (29.6%), San Jose de Kamarata (7.8%) and Atapa (5.2%), reflecting the impact of the Capuchin mission and the Adventist church which are located in Kamarata and Kovipa, respectively. This shows a distance decay effect, that is more traditional houses are found as distance from the mission and church center increases.

The majority of the houses (71.5%) have walls made of *bahareque* or mud, 18% are made of palm leaves and 5% of brick blocks. The predominant material of the roofs is zinc (63.5%) while 36% maintained traditional palm leaves (i.e., Cucurito - *Maximiliana regia* - and San Pablo) construction. Dirt is the main material in 80% of the house floors while cement is prevalent in 18.5%. Sanitary restroom services are lacking in 93% of the houses creating potentially a health hazard in concentrated areas, while 4% have a toilet with septic tank and 2.5% use latrines. Water is serviced through pipes to 58.5% of the houses while women carry water from the river, streams and creeks in 37% of the households. Electricity by community power plants (or hydropower in the case of Kamarata) is provided only to 38.5% of the dwellings. Solar panel introduced by outside tour operators is used in only 2.5% of the houses, which are linked to tourism activities.

¹⁵⁰ These would fall under the categories of circular with conical roof - *waipa*-, and oblong - *parapán*- or rectangular - *wata timeaken*- with pitched roof (Simpson, 1940; Thomas, 1981).

Wood is the main source for cooking in 95% of the houses, while more acculturated households (4%) use kerosene, gasoline, gas or electricity.

Concerning household composition, an average of 6.4 people lives in a house, but this can range from one to 19 people. One head of household lives in 84.5% (169) of the houses while 10% (20) have two head of households (meaning two families) and 3% (6) have three to four heads of household. As discussed before the traditional pattern, which conform the basic economic unit, is that one to mostly three nuclear families lives in one or rarely two contiguous dwellings.

4.5.3 Ethnic group composition and migration

The majority (94.3%) of the people in the valley consider themselves Kamaracoto, and the rest include Arecuna, Taurepan, Panare and one Akawaio male. Most of the people in the census (86%) have lived in the valley all their lives. In terms of relative migration, 4% (51) of the population migrated to the area 10 or more years ago and about 10% (82) arrived in the last 9 years including 23 people (1.8%) in the last year. Those that reported where they used to live before migrating to the valley, 8.6% (110) came from areas within the Bolivar State while 0.5% came from another state or from English Guyana.

It is difficult to evaluate the scale of the migration to the valley when there are no other parameters to compare. However, it is argued that the migration to the valley has been historically significant as evidenced in the population density in the valley compared to the rest of the region. In the last 10 years the pull factors has been availability of agricultural land, religious, education, health and public services, marriage opportunities and lately job opportunities in tourism.

The remoteness of the Kamarata Valley and changes to the traditional pattern of seasonal mobility and migration among the Kamaracoto is observed by looking at the places the Kamaracoto visit and the frequency of these visits. Overall, the majority of this population, 94% out of 355 respondents (49.2% women and 44.7% men) does not travel to other areas beyond *Canaima*, *Ciudad Bolívar*, *Kuana* and *Awaraparú*. Still, very few travel to these places and there is a marked difference in gender in where they travel and the frequency of their travel. For instance, Ciudad Bolívar (Capital of the Bolívar State) is the place visited by most women (4.8%) who travel at least once a year, while Canaima is the place visited by most men (9%). Fewer men (6%) go to Ciudad Bolívar at least once a year and 3.6% of women go to Canaima. Although there is some visitation to Kuana and Awaraparú the frequency is low and the communities are considered to be within the Kamarata Valley. The pattern is more defined by motivation than by distance. Travel to Ciudad Bolívar is only by plane and the main reasons are health services, errands, to pick up paychecks and business.

Travel to Canaima on the other hand is mainly by dugout boats with outboard motors in a two-day journey and sometimes by small airplanes. The main reasons are to work in tourism as excursion guides and assistants and as staff in the Canaima resort and to visit relatives (*parientes* that live in the *Malocas* community that developed adjacent to the resort), and to lesser extent for business, run errands and health. This pattern is certainly very different from the old trade networks of exchange described by Thomas and Butt-Colson but reflects the maintenance of the relative autonomy of the Kamaracoto.

4.5.4 Religion

Catholics comprise 90.5% of the population while Evangelicals represent only 4.9%. All the Evangelicals are Adventists and not all the Catholics are related to the mission. The presence of the Kamarata mission is reflected in the large amount of people that belong to the Dominican order (75.1%) including very few that still consider themselves to be part of the Franciscan order. Another 13.3% (170) belong to the syncretic religious movement of the Hallelujah including 2.8% (29) that reported also to be part of the Dominican order. The Adventists live all concentrated between Kovipa and Münatapo and the Hallelujah believers live between Kovipa, Kamarata and San José de Kamarata showing in both instances a distance decay effect. In contrast the Dominican order followers are found in all the neighborhoods but concentrated most in the largest neighborhoods such as Kamarata, San José de Kamarata, Santa Marta and Kovipa.

4.5.5 Occupation

Only 10.1% (129) of the population has a job with a salary although 23% (43) of these people reported that their jobs were occasional. Tourism generates most of the paid job opportunities (62%) followed by teaching jobs (18.6%), store vendors, arts and crafts vendors, mission workers and other (see Table 4.17). Of the 80 people involved in tourism activities 40% have occasional or seasonal jobs, 20.3%(16) work for the local indigenous tourism organization (ACKY-*Asociación Civil Kavak-Yeuta*), 67.1% (52) work for an indigenous patron and 13.9% (11) work for outside tourism operators (non-indigenous patron).

The ACKY besides paying the salary to its staff, it also pays the salary of the electrical plant supervisor in Kamarata, one nurse and the indigenous Inparques

personnel.¹⁵¹ All the schoolteachers have permanent jobs and work for the Ministry of Education. However, both the Dominican and the Adventist mission have one teacher each).

Table 4.17 Types of jobs by gender in the Kamarata Valley

	Freq.	%	Females	% total	Males	% total
Tourism	108	68.8	16	14.8	92	85.2
Teacher	24	15.3	16	66.7	8	33.3
Store owners and vendor	8	5.1	3	37.5	5	62.5
Arts and Crafts	4	2.5	4	100.0		0.0
Mission worker	4	2.5	3	75.0	1	25.0
Nurse	2	1.3	2	100.0		0.0
Inparques	2	1.3		0.0	2	100.0
Carpenter	1	0.6		0.0	1	100.0
Meteorologist	1	0.6		0.0	1	100.0
Electric Plant Supervisor	1	0.6		0.0	1	100.0
Constructor	1	0.6		0.0	1	100.0
Conuquero	1	0.6	1	100.0		0.0
TOTAL	157	100.0	45	28.7	112	71.3

Of the 108 people that work in tourism, men hold 85% of these jobs occupying the positions as guides, tourism entrepreneurs, outboard motorists, tourism operators managers, staff and maintenance personal, car drivers, cooks and other assisting and supporting positions such as in construction, mechanics and food harvesting.¹⁵² On the other hand women hold 15% of the jobs in tourism, mainly in cooking, maintenance, laundry and food harvesting.

Women not only have fewer job opportunities in general but also in average they have lower salaries than men do when compared across job types specifically within

¹⁵¹ ACKY received at the time 25% of the entrance fees collected by the two INPARQUES staff.

¹⁵² Only two local indigenous enterprises pay somebody to harvest food from the conuco for the tourist. These two enterprises are family managed (economic unit) enterprises and they own the conucos from where they take food supplies. I did not find any cases in which tourism enterprises were buying food surplus from the people in the neighborhoods.

tourism jobs, teachers and store vendors. Within tourism, a difference might be expected given the division of labor and perceived importance of the different tasks. However, it is not the case for the other categories (see Figure 4.10).

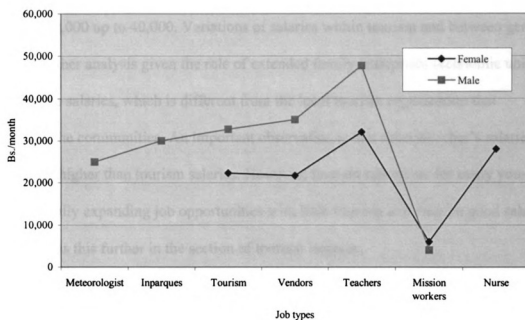


Figure 4.10 Average salary by gender.

The average salary for women in tourism is Bs.22,315 (\$53.47) per month while men average is Bs. 32,739 (\$ 78.45). This difference could be partly explained by the fact that men tend to be the owners or partners of the local tourism enterprises or have needed specialized construction, driving or navigating skills therefore they receive higher salaries, statistically behaving as outliers. These salaries are between Bs. 150,000 to Bs.300, 000 per month (\$359.45 to \$718.90 at an exchange rate of Bs.417.3 / dollar in 1996). If we control for these, the average salaries in tourism between genders are quite comparable.

The highest paid jobs for women in tourism is for cooks that range from Bs.6, 000 per month as an assistant up to a rare Bs.50, 000 (\$119.80) as a head cook. Men as guides can make as much money or more than a head cook ranging from Bs. 1,000 per month as a guide assistant to Bs. 65,000 (\$155.76) as a specialized guide that speaks at least a foreign language. Additionally, tour operator managers have good salaries that range from Bs. 30,000 up to 40,000. Variations of salaries within tourism and between genders warrant further analysis given the role of extended family enterprises (economic unit) in determining salaries, which is different from the local tourism organization that represents the communities. An important observation is that schoolteacher's salaries are on average higher than tourism salaries. However, tourism represents for many young people, locally expanding job opportunities with little training and relative good salaries. I will discuss this further in the section of tourism impacts.

Considering the extent of the opportunities that tourism has generated, the neighborhoods of Kamarata, Kovipa and Uruyen hold almost 79% of the jobs in tourism (Table 4.18). Tourism have benefited also other people from another 8 neighborhoods who travel by foot, bike or by car everyday covering as much a 8 to 13 kilometers or more (one way) to go to work.

Despite the paid job opportunities in the valley, the Kamaracoto remain traditional in their subsistence economy. Table 4.19 shows that 41.4% of the population practices shifting cultivation, 21.8% obtain protein sources from fishing while 9.1% obtain protein from hunting. The crafting of traditional arts is practiced by 9.6% of the respondents but 37.3% commercialize it, while 30% produce crafts for their household.

Table 4.18 Number of people working in tourism by attraction and tour operators

Attraction	KAVAK			URUYEN	Kamarata Valley Tourism*	Total	%
Tour Operator	ACKY	Excursiones Pemón	Makunaima	Yuruán			
Kamarata	15	2	1	1	21	40	50.0
Kovipa					12	12	15.0
Uruyen				11		11	13.8
Atapa			1		4	5	6.3
Kavak		4				4	5.0
Wapinao		2				2	2.5
Sta. Marta	1				1	2	2.5
Avasakapan		2				2	2.5
San José					1	1	1.3
Münatapo					1	1	1.3
Total	16	10	2	12	40	80	100.0
%	20.0	12.5	2.5	15.0	50.0	100	

In addition, 15% of the people that practices shifting cultivation do it to sell agriculture products. This is mainly *casabe* cakes to tourist centers (i.e., Canaima) and for local stores and some fruits such as pineapples (*piñas*) and papaya (*lechosa*). The community of Kovipa holds a community conuco to generate income for the local schools as well as to provide food for the school children.

Table 4.19 Population distribution by other occupation

	Total	%	Female	%	Male	%
Agriculture	529	41.4	249	47	280	53
Fishing	279	21.8	51	18	228	82
Hunting	116	9.1		0	116	100
Arts and Crafts	123	9.6	54	44	69	56
Animal Husbandry	13	1.0	5	38	8	62
Timber Extraction	11	0.9		0	11	100
Construction	8	0.6		0	8	100
Mining	6	0.5		0	6	100
Business	5	0.4	3	60	2	40
Gathering	4	0.3	2	50	2	50
Transportation	3	0.2		0	3	100
Carpentry	2	0.2		0	2	100

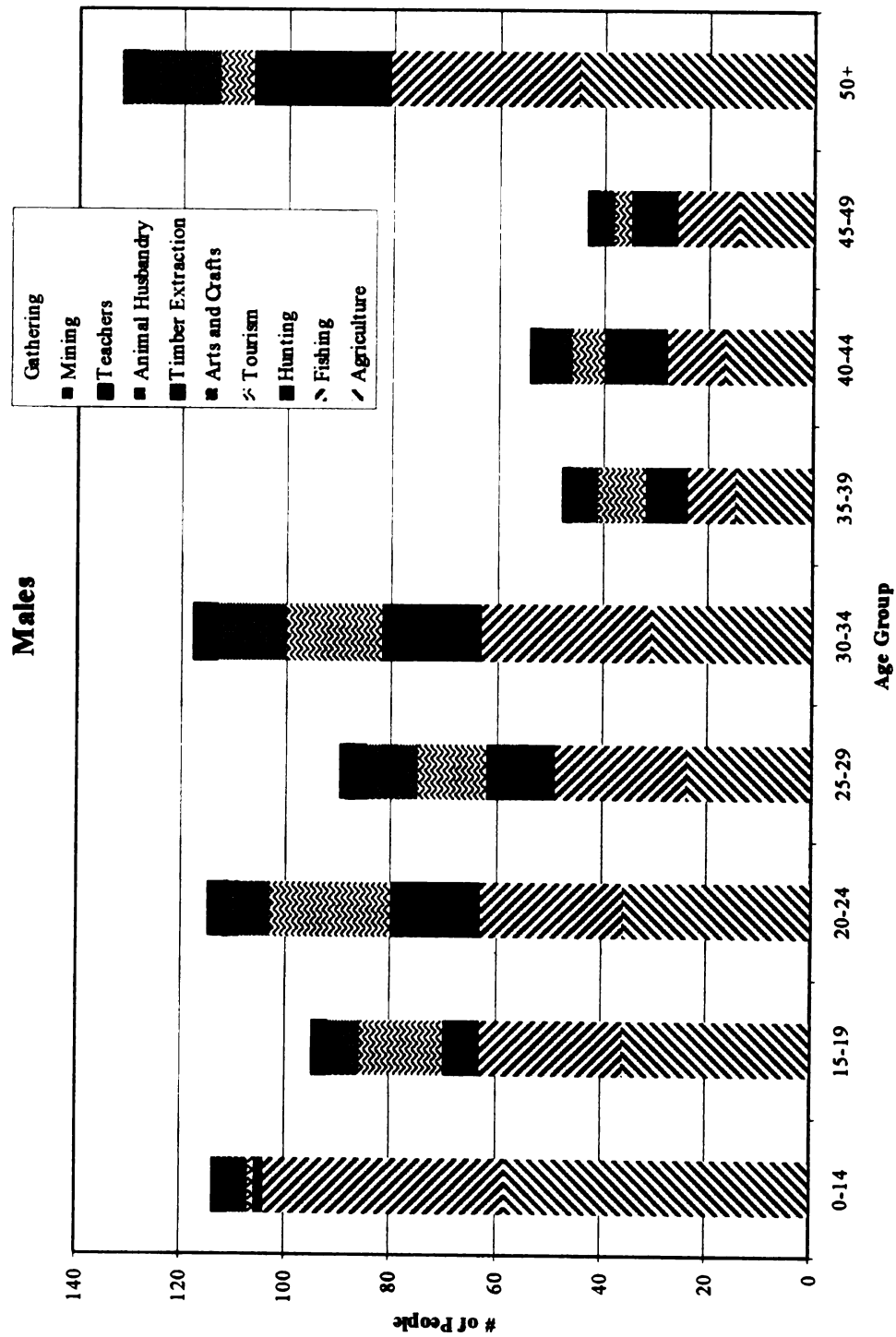


Fig. 4.11. Economic activities by males and age groups

Females

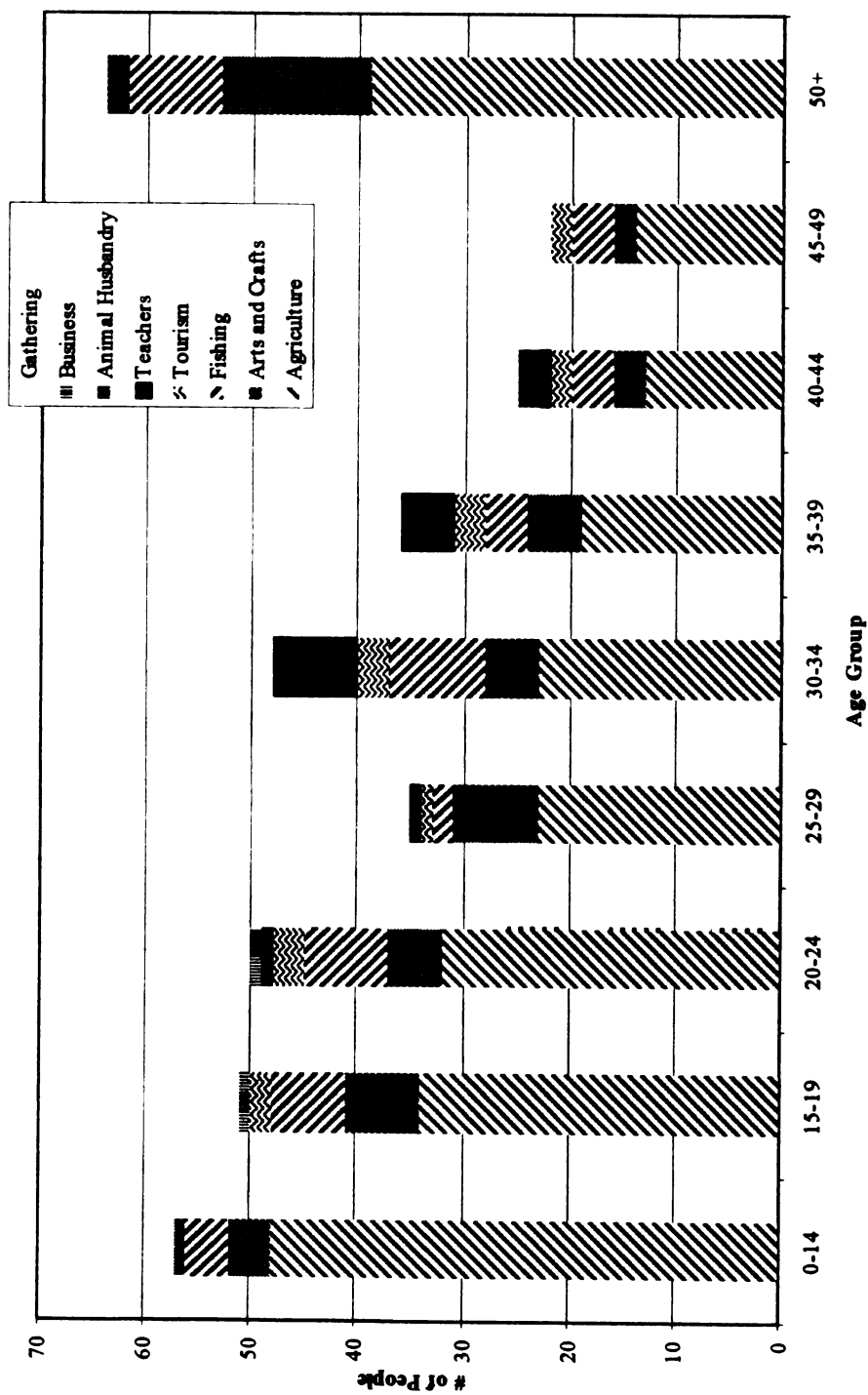


Fig. 4.12. Economic activities by females and age groups

Figure 4.11 above illustrates the difference between genders regarding economic activities for different age categories. In general males benefit from a wider range of working opportunities not only defined by the traditional division of labor (i.e., fishing, hunting, mining, timber extraction) but also reflecting their strong access to tourism jobs partially defined by their relative higher access to education.

4.5.6 Education and literacy

In the valley 86.2% of the population speak their native language (Carib Language which the Kamaracoto dialect predominates), which they actually use to communicate in a daily basis in the same proportion. Spanish on the other hand is spoken by 42% of the population while 1.8% reported to speak English and 3 other people said they spoke other languages such as Portuguese, German and Italian. When asked whether or not they knew how to read and write in Spanish and in their native language, a greater percentage (54.6%) responded they read and wrote in Spanish but only less than half reported to read and write in their native language. Regarding education level, 35.1% have no formal education, which is observed strongly in women over 40 years of age and men above 50 years (see Figure 4.12). It is the 40 years age cohort that first received formal education when the Kamarata mission education activities started in 1958. Overall, men have had greater access to education with higher numbers in all education levels from preschool to college levels.

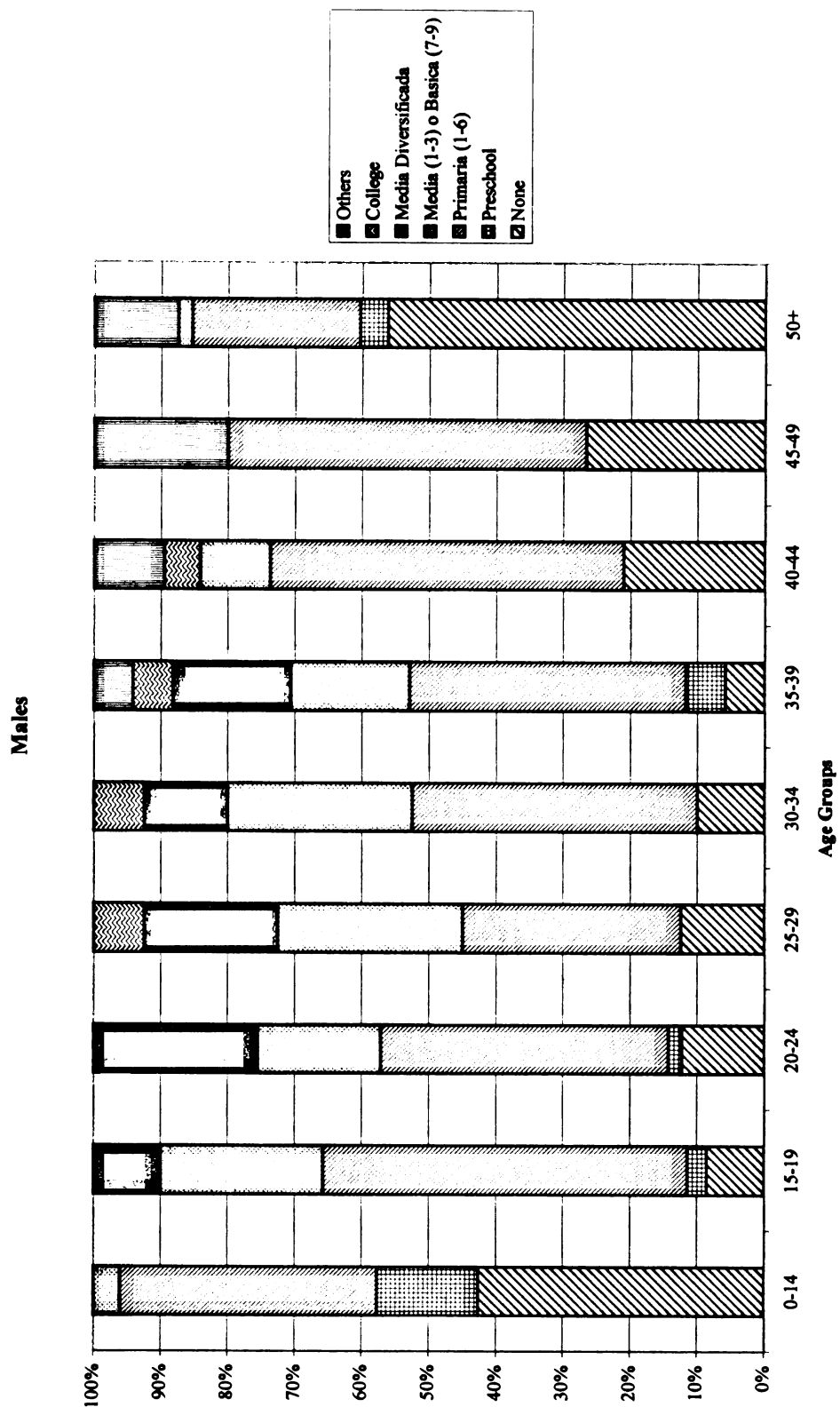


Figure 4.13 Education level by males and age groups

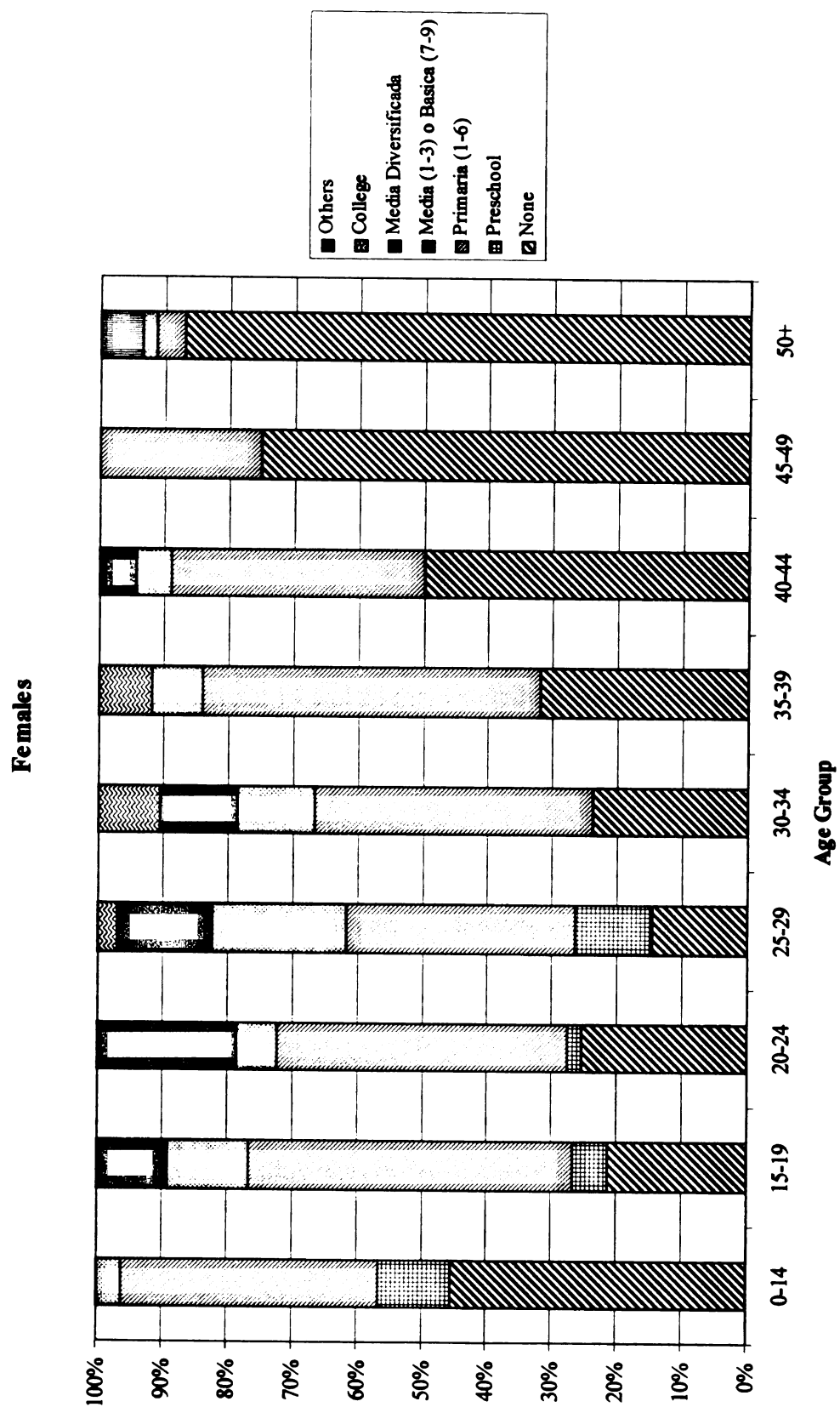


Figure 4.14. Education level by females and age groups

If we consider an education sex ratio, then there are 81.3 males per 100 females having no formal education. Yet, there are 137.5 males per 100 females with preschool education; there is a ratio of 113.6 with some primary education (1 to 6 grade) level; a ratio of 181.1 that have some junior level (Básica 7 to 9 grade) education; a ratio of 129.6 that have high school level and a ratio of 114.3 that have some college education. Furthermore, men over 35 have had technical training in the mission workshops and outside while women have tended to stay in the house or work in the conucos with their mothers.

It is important to note that in a population that had in 1996, 51% of children under the age of fifteen, 45.5% of this cohort did not attend formal education classes. If we add the cohorts 16-20 and 21-25 this percentage increases to 53%. This segment include all the young people between 14 and 24 that worked in tourism who represent 38% of all workers in the sector.

Table 4.20 Education Attendance lost to Tourism

Age Group	# of people in age cohort	# that attend school	# that work in tourism and do not attend school	Males	Females
0-15	652	355	1	1	
16-20	126	50	12	11	1
21-25	99	8	18	15	3
Total	877	413	31	27	4

Table 4.20 above illustrates the education desertion of young people due to tourism. The general tendency is desertion to help with the household endeavors, especially females. The table suggests that tourism serve as a pull factor contributing to the desertion from education of young males between 15 and 24 years of age. Yet, after high school there is no college education alternative forcing people to leave at a very high

expense or stay and work in tourism and in the family traditional activities. Deserting to work in tourism also implies not working in agriculture. For instance, two thirds of the women and half of the men that work in tourism do not work in agriculture at all depending on their income to buy food or on the production of others in the household. This issue of the displacement of labor from agriculture to tourism is discussed further in the section of tourism impacts.

4.5.7 Shifting cultivation (Conucos) in the Kamarata Valley

In the valley, 18 conucos in production were sampled in six different areas including forest savanna and the forest-hills. The conucos averaged 7,213 m² ranging from 3,000 in *Kungtüpüy* to 18,925m² in *Topoko*, with an inclination between 1 to 3 degrees and an average distance from the residence of 3 kilometers.

In the valley, shifting cultivation is practiced in 66% (151) of the 299 families. Families may have one, two or three conucos. Commonly, a family may have an old conuco next to be left in fallow, one in production and a new one in foundation. In addition, one of these conucos may be just specifically for *casabe* or *cachiri* making. A conservative estimate of the amount of land used for shifting cultivation is 217.8 hectares considering that each family has at least two conucos and the average conucos is 7,213m². According to these estimates, if each Kamaracoto family clear forest for conuco every year then 109 hectares of forest was cleared in 1996.

The relationship between area cultivated and the number of inhabitants in the valley is approximately 1,704m²/inhabitant. The diversity of conucos products is as diverse as the ones found by Urbina (1979). Table 4.21 shows the average in percentage of the different type of crops produced in the conucos sampled.

Table 4.21 Production in selected conucos

Spanish Name	Scientific Name	Average in percentage of all Conucos
Yuca amarga (Casabe)	<i>Manihot esculenta</i>	39.0
Piña	<i>Ananas comosus</i>	21.6
Yuca dulce	<i>Manihot dulcis</i>	18.6
Ají	<i>Capsicum silvestre</i>	3.5
Batata	<i>Ipomoea batata</i>	2.5
Patilla	<i>Citrullus vulgaris</i>	2.4
Plátano	<i>Musa paradisiaca</i>	2.2
Ñame	<i>Dioscorea alata</i>	2.0
Cambur	<i>Musa paradisiaca</i>	1.2
Lechosa	<i>Carica papaya</i>	1.2
Arroz	<i>Oryza alta</i>	1.1
Caña de azúcar	<i>Saccharum officinarum</i>	1.0
Algodón	<i>Mandevilla caurensis</i>	0.6
Mani	<i>Arachis hypogaea</i>	0.6
Mapuey	<i>Dioscorea trifida</i>	0.4
Guamo	<i>Inga</i>	0.3
Aurosa	?	0.3
Auyama	<i>Cucurbita moschata</i>	0.3
Merey	<i>Anacardium occidentale</i>	0.2

In the Kamarata Valley, *Yuca amarga*, *Piña* and *Yuca dulce* make 79.2% of the production in the conucos on average, which is more or less the traditional conuco composition reflecting the Pemón diet. Despite there are conucos with a tendency towards monoproduction that start to reflect changes in the traditional shifting cultivation practices. In the next chapter, this findings will be discussed in light of the impacts of tourism and other secondary data. Such impacts have major environmental implications for the stability of the conuco system.

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**THE POLITICAL ECOLOGY OF NATURE-BASED TOURISM IN CANAIMA
NATIONAL PARK, VENEZUELA AND THE CHANGING RESOURCE RELATION
OF THE PEMON-KAMARACOTO**

VOLUME II

By

Domingo A. Medina Dagert

A DISSERTATION

**Submitted to
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CHAPTER 5

TOURISM IN THE KAMARATA VALLEY AND ITS IMPACTS ON THE PEMON KAMARACOTO AND THEIR ENVIRONMENT

The focus of this chapter is tourism development and its impacts in the Kamarata Valley. However, this will be addressed by providing a tourism development scope from the national to the local level and establishing its linkages. First, a synthesis of the political economy of Venezuela is discussed underscoring the role of tourism in the economy and the emergence of ecotourism in the national tourism policy in the 1990's. Second, tourism in Canaima National Park, its market and trends is presented. Third, the tourism system in the Kamarata Valley is described from the supply side showing the linkages of the Kamaracoto with the global tourism structure through their business relations with outside tour operators. Fourth, a brief history of tourism in the Kamarata Valley is presented providing a diachronic perspective to understand the evolution of tourism in the region, the actors and their power relations. Fifth data regarding the tourism arrivals and receipts in the valley is analyzed. Finally, the impacts of tourism development as experienced by the Kamaracoto and its environmental consequences are discussed. Central to this impact analysis are changes in the Kamaracoto social organization (domestic unit of production) due to tourism, and how this is related to the breakdown of the shifting cultivation practices. Such changes have implication for the availability of forest resources for conucos into the future and to the integrity of forest formations susceptible to degradation processes.

5.1 The Political Economy of Tourism in Venezuela and the Emergence of Ecotourism

Historically tourism has played a minor role in the Venezuelan national economy, which has been and continues to be dependent on the oil industry since the early 20th century.¹⁵³ From 1962 to 1996 tourism arrivals and receipts grew 3% and 5.8% per year respectively, slightly above the world trends but when receipts are considered in real terms¹⁵⁴ the overall growth is 1.2%, much slower than the world trends. Furthermore, these economic benefits are shadowed by an increasingly negative balance of payments in the travel accounts. This is due to the expenditure of 2.4% of the population that have the means to travel abroad and contributing with its expenditure to 16.4% of the import sector in the travel account of the country in 1995 (see Appendix 5.1 and 5.2).

An analysis from 1968 to 1995 show that oil exports in Venezuela have remained the largest contributor to the export sector, but since 1982 it has been slowly declining reaching a low of 73.2% in 1995 (Table 5.1). On the other hand, the contribution of tourism receipts to the export sector has not been large, reaching a high point of 5.2% in 1986 when oil export contributions dropped 6.6%. Since 1986, the tourism contribution has fluctuated although continued downward until 1991 when it started to slowly increase reaching 4.5% of exports in 1995. Yet a log regression analysis (not shown here) reveals that tourism receipts had a greater rate of growth during the 27 years of analysis averaging 4% per year, while total exports averaged 2.7% and oil exports 2.3%.

¹⁵³ The development of the tourism industry in Venezuela has been shadowed by the importance of what Thomas (1995) refers to the “commodity lottery” of oil exploitation. This “commodity specialization” has had an important role in shaping the economic growth of the country and its economic structure.

¹⁵⁴ This means adjusting the nominal receipts values using the Consumer Price Index (CPI) as an inflation factor (Wilkinson, 1996). The objective is to have a better idea of the evolution of tourist receipts in the country isolating the effect of price variations.

Table 5.1 Foreign Trade: Exports a Imports F.O.B. (Million US\$.)

Period	Exports Total	Imports Total	Oil Exports	% of Exp.	Tourism Receipts	% of Exp.	Tourism Expend.	% of Imp.
1968	2,506	1,510	2,330	93.0%	40	1.6%	122	8.1%
1969	2,444	1,554	2,279	93.2%	46	1.9%	129	8.3%
1970	2,640	1,713	2,371	89.8%	50	1.9%	140	8.2%
1971	3,152	1,896	2,882	91.4%	61	1.9%	138	7.3%
1972	3,202	2,222	2,857	89.2%	73	2.3%	170	7.7%
1973	4,803	2,626	4,328	90.1%	119	2.5%	*	
1974	11,290	3,876	10,548	93.4%	174	1.5%	*	
1975	8,982	5,462	8,324	92.7%	180	2.0%	383	7.0%
1976	9,342	7,337	8,763	93.8%	214	2.3%	*	
1977	9,661	10,194	9,110	94.3%	261	2.7%	*	
1978	9,174	11,234	8,740	95.3%	205.3	2.2%	*	
1979	14,360	10,004	13,633	94.9%	265	1.8%	1,588	15.9%
1980	19,275	10,877	17,562	91.1%	243.4	1.3%	199	1.8%
1981	20,181	12,123	18,609	92.2%	187.5	0.9%	2,373	19.6%
1982	16,516	13,584	15,633	94.7%	309.1	1.9%	2,925	21.5%
1983	14,759	6,409	13,857	93.9%	310	2.1%	1,073	16.7%
1984	15,878	7,246	14,824	93.4%	357.7	2.3%	1,063	14.7%
1985	14,283	7,501	12,956	90.7%	416.3	2.9%	597	8.0%
1986	8,535	7,866	7,178	84.1%	443.5	5.2%	543	6.9%
1987	10,437	8,870	9,054	86.7%	309	3.0%	402	4.5%
1988	10,082	12,080	8,158	80.9%	346.7	3.4%	565	4.7%
1989	12,915	7,365	10,001	77.4%	389	3.0%	640	8.7%
1990	17,444	6,917	13,953	80.0%	496	2.8%	1,023	14.8%
1991	14,968	10,259	12,302	82.2%	510	3.4%	1,227	12.0%
1992	13,988	12,880	11,208	80.1%	444	3.2%	1,428	11.1%
1993	14,586	11,257	10,565	72.4%	599	4.1%	2,123	18.9%
1994	15,686	7,709	11,288	72.0%	540	3.4%	1,483	19.2%
1995	18,630	11,447	13,631	73.2%	840	4.5%	1,874	16.4%

*Missing data.

Source: Banco Central de Venezuela, Informe Económico (Several years)

BCV, Series Estadísticas de Venezuela de los últimos Cincuenta Años.

Banco Central de Venezuela, Anuario de Cuentas Nacionales (Several years)

The contribution of tourism receipts alone to the GDP has been marginal reaching its highest point of 1.7% in 1996. When considering the contribution of the tourism sector as a whole (trade, hotel and restaurant) to the GDP (without considering multiplier effects) tourism has remained second after oil since 1989 reaching \$8,9 million dollars in 1996 representing 15.3% of the GDP. However, it has been slowly losing ground since 1991 probably due to new open policies for foreign investments in the oil industry (Table 5.2).

Table 5.2 Venezuela Gross Domestic Product by Selected Economic Sector (US\$ Million) and percentage share to total GDP.

	1989	1990	1991	1992	1993	1994	1995	1996
NON-OIL	29,277	32,298	38,767	42,883	42,856	41,835	43,481	42,331
OIL	8,288	12,601	10,884	9,343	9,280	9,835	9,376	15,962
Trade, Hotel & Restaurants	6,963	7,683	9,249	10,533	10,002	9,200	9,499	8,899
Manufacture	6,157	6,595	7,559	7,610	7,481	7,150	7,711	7,737
Real Estate	2,382	2,676	3,108	3,298	3,472	3,343	3,657	4,007
Community, Social and Personal Services	1,604	1,876	2,242	2,747	3,130	3,295	3,698	3,897
Transportation and Storage	1,565	1,732	2,338	2,848	2,948	2,877	3,173	3,794
Construction	1,794	2,022	2,673	3,412	3,179	2,495	2,244	2,490
Agriculture	2,324	2,479	2,717	2,792	2,791	2,573	2,832	2,415
Central Government Services	2,722	2,815	3,418	3,418	3,225	2,830	2,817	1,925
Tourism Receipts	389	496	510	444	599	540	840	1,000
SUB-TOTAL OIL AND NON-OIL	37,565	44,899	49,651	52,226	52,136	51,670	52,857	58,293
TOTAL GDP (INCLUDING ADJUSTMENTS)	38,130	44,796	49,677	52,329	52,183	50,777	53,564	58,293

	1989	1990	1991	1992	1993	1994	1995	1996
NON-OIL	76.8%	72.1%	78.0%	81.9%	82.1%	82.4%	81.2%	72.6%
OIL	21.7%	28.1%	21.9%	17.9%	17.8%	19.4%	17.5%	27.4%
Trade, Hotel & Restaurants	18.3%	17.2%	18.6%	20.1%	19.2%	18.1%	17.7%	15.3%
Manufacture	16.1%	14.7%	15.2%	14.5%	14.3%	14.1%	14.4%	13.3%
Real Estate	6.2%	6.0%	6.3%	6.3%	6.7%	6.6%	6.8%	6.9%
Community, Social and Personal Services	4.2%	4.2%	4.5%	5.2%	6.0%	6.5%	6.9%	6.7%
Transportation and Storage	4.1%	3.9%	4.7%	5.4%	5.6%	5.7%	5.9%	6.5%
Construction	4.7%	4.5%	5.4%	6.5%	6.1%	4.9%	4.2%	4.3%
Agriculture	6.1%	5.5%	5.5%	5.3%	5.3%	5.1%	5.3%	4.1%
Central Government Services	7.1%	6.3%	6.9%	6.5%	6.2%	5.6%	5.3%	3.3%
Tourism Receipts	1.0%	1.1%	1.0%	0.8%	1.1%	1.1%	1.6%	1.7%

Source: Central Bank of Venezuela (Varios years)

The relative contribution of tourism to the GDP has to be analyzed with care given that government statistics lump together in one category trade, hotel and restaurant inflating the indicators for the tourism sector. This same issue applies to the employment data where it seems that the “tourism sector” has demonstrated that is a labor-intensive industry. The tourism sector has increasingly contributed to employment opportunities since 1950 reaching 22.7% of the total employment in 1996 increasing proportionally

more rapidly than any other sector in the Venezuelan economy. This figure does not correspond to the observation of other analysts that observe that employment in the sector was at 15% in 1997 representing an increase by more than a third compared to 1996. This discrepancy shows the variability in data source and analysis. Data in terms of types of jobs and salaries in the tourism sector are not available limiting a better assessment of the industry contribution to the Venezuelan economy.

From the political point of view, tourism has been used in different phases of the Venezuelan political history. This has been observed in the political discourse and the economic plans of the country focusing in tourism as a way to diversify the economy (specially when oil prices fluctuate) generate foreign exchange and employment, reduce unbalanced income distribution and satisfy public recreational and domestic tourism needs. The government has played a central role as a tourism planner and developer up to the 90's when within the new economic agenda of the country the tourism sector moves towards decentralization, privatization of public hotels and other assets, casinos and developing ecotourism.

Ecotourism emerges in the Venezuelan national tourism plans in a decade of world environmental concern and sustainable development promoted from the international arena. This is very similar to the promotion of international tourism by the United Nations as a strategy for development of the least developed countries (LDC's) in the 1960's. Ecotourism is promoted in Venezuela as part of a new economic agenda of free market economy in which tourism serves as a strategy to complement the tourism sector based on the world "ecotourist" market trends. The strategy is based on the potential of capitalizing on the "comparative advantage" of the country's megadiversity

and unique natural and cultural resources. This is done in the absence of supporting international and national data.

The Venezuelan government to jump-start the industry and its tourism promotional strategy, started by decentralizing Corpoturismo (Venezuelan Tourism Corporation) by transferring power to state agencies. Subsequently, the government focused on attracting foreign investors for tourism projects by supplying more liberal investment regulations (as in other sectors), offering low-rate loans and tax breaks and other national and municipal tax concessions for tourism related investment (i.e., hotel and infrastructure development). In the past, these incentives were neglected because of Venezuela's dependency on oil (Waters, 1994; Marino, 1996; Alvin, 1996). This effort has been aided by non-governmental organizations such as CONAPRI (Council for Investment Promotion) and VenAmCham (Venezuelan-American Chamber of Commerce and Industry) that concentrate multinational and State and private domestic corporations. Both promote and attract foreign investment and capital to Venezuela in all sectors including tourism and ecotourism although VenAmCham focus in enhancing only trade and investment between the US and Venezuela.

The promotion of ecotourism has been built through market segmentation relying on public and private partnership through conferences, international fairs, news releases and articles and strategic marketing through the Internet. The responsibility of developing the ecotourism agenda is given to the private sector which is perceived to have the "know how" of ecotourism development and the financial, organizational and marketing capacity. This partnership promotes the establishment of private outbound and inbound ecotour operations and legitimizes those already operating in PA's such as in Canaima

National Park. The impacts of the ecotourism agenda are yet to be seen. As it is being promoted ecotourism is expected more to respond to the enhancement of the national tourism sectors rather than focusing in its conservation and development principles in specific destinations.

5.2 Tourism in Canaima National Park

The national park of Canaima is considered the first and most important tourism destination in Venezuela (Bacci, 1994). Canaima's relative remoteness, distinctive savanna and *tepüi* landscape; its myriad of rivers and waterfalls including *Angel Falls* (the highest waterfall in the world); its level of resource endemism and biodiversity; its indigenous peoples culture and lifestyle; its history of legends, myth, explorations, dinosaurs, gold and diamond mining, and Catholic and Adventist missions, have all created an image of a "lost world".¹⁵⁵ These features have attracted historically conquerors, explorers, missionaries, ethnographers, writers and journalists, bush pilots, scientists, miners, entrepreneurs, developers, tourists and tour operators.

Canaima's resources make it an impressive tourism pole with differentiated products that provide great competitive advantage compared to other tourism resources in Venezuela, as well as in the Caribbean and North of South America region. Data on tourist visitation in Canaima National Park is scattered and a systematic gathering of this information is difficult. This is due to the size of the park, limited resources for surveying and the lack of shared criteria's and coordination among the various institutions and tourism operators that collect such information. Canaima has a high demand of foreign tourists and an increasing rate of visitation. In a supply study of 280 tourism packages in

¹⁵⁵ See (CONAHOTU, 1974; Romero, 1992; Weidmann, 1990) for thorough information about Canaima.

Venezuela, Canaima by itself represented 9.4% of the destinations marketed (Bacci, 1994). Likewise, in 1991 and 1992 Canaima concentrated 100% of tourist visitation to the Bolivar State.¹⁵⁶ Since then the Bolivar State has diversified its tourism product and has surveyed other destinations.

Canaima supported 76% of the Bolivar state visitation in 1993, decreasing its share in 1995 (69%) but still ranking as the top tourist destination (Appendix 5.3). At the national level, Canaima represented 13% of tourist arrivals to the country in 1991, reaching 26% in 1994 and sliding to 21% in 1995.

Table 5.3 show some of the visitation data available for Canaima National Park from different sources (see also Figure 5.1). Tourism activities in Canaima started with the establishment of a small camp-hotel in 1954, eight years before the creation of the park (CONAHOTU & MAC, 1974).¹⁵⁷ The early tourism organization and promotion is attributed to Charles Vaughan, the Truffino family and the Venezuelan Airlines *LAV* and *AVENSA*.¹⁵⁸ The camp is located in the north western corner of the park facing the Canaima lagoon formed by the *Hacha* waterfall that spills water from the Carrao River.

¹⁵⁶ The high percentage is greatly due to missing data and lack of data collection from other destinations in the State.

¹⁵⁷ At the time of the creation of the park there were people and enterprises already occupying the Canaima lagoon area working in tourism development. Implicitly they had certain legal land rights but they did not legalize their situation. The planners that elaborated the *Plan Rector* for Canaima in 1974 pointed to the urgency to clarify this situation given that it was going to affect the effective implementation of the guidelines and recommendations of the plan as well as the integral management of the park (CONAHOTU & MAC, 1974). Still today their legal situation has not been clarified, more enterprises in the areas have proliferated and there is no clear policy for land occupation given the lack of a management plan in this sector of the park.

¹⁵⁸ The creation of Canaima resort at Hacha Falls and lagoon is attributed to Charles Vaughan a North American ace pilot, adventurer and developer that flew DC-3 planes for the TACA company in the late 40's and early 50's, and then working privately with a small aircraft until the 60's. Vaughan is responsible for opening up and developing Icabarú (and probably other sites), a gold and diamond mining area in the Gran Sabana near the Brazilian border. Vaughan promoted the development of the Icabarú town providing transportation, food, clothing and mining equipment and building materials for the miners in exchange for gold and by bringing illegal Brazilian miners from Boa Vista across the border (Di Turno, 1963; Robertson, 1975).

The camp is still in operation, managed today by *HOTURVENSA* (the hotel branch of *AVENSA*) and it has expanded creating a ripple effect to other sectors of the park.

Table 5.3 Tourist flows in Canaima National Park 1964-96

	1964	1971	1981	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
G.Sabana			1,616	3,860	6,700	6,396	2,760	5,165	41,159	55,806	56,469	77,020	79,242	*
Route														
Canaima	1,346	4,688	*	*	*	*	*	*	25,334	37,324	21,910	24,929	31,213	*
Lagoon														
Kavak									11,427	11,861	12,031	9,939	12,314	6,389
Uruyen													1,453	146
Arecuna														1,611
TOTAL	1,346	4,688	1,616	3,860	6,700	6,396	2,760	5,165	77,920	104,991	90,410	111,888	124,222	

Note: Data 1964-1971 CONAHOTU (1974); Data 1981-1990 C.V.G. Encuesta de Viajeros Ruta Gran Sabana; Data 1991-1995 Dir. Turismo del Edo. Bolivar (1994, 1995, 1996); Data on Kavak, Uruyen and Arecuna 1994-1996 based on Aerotuy and Kavak camp records.

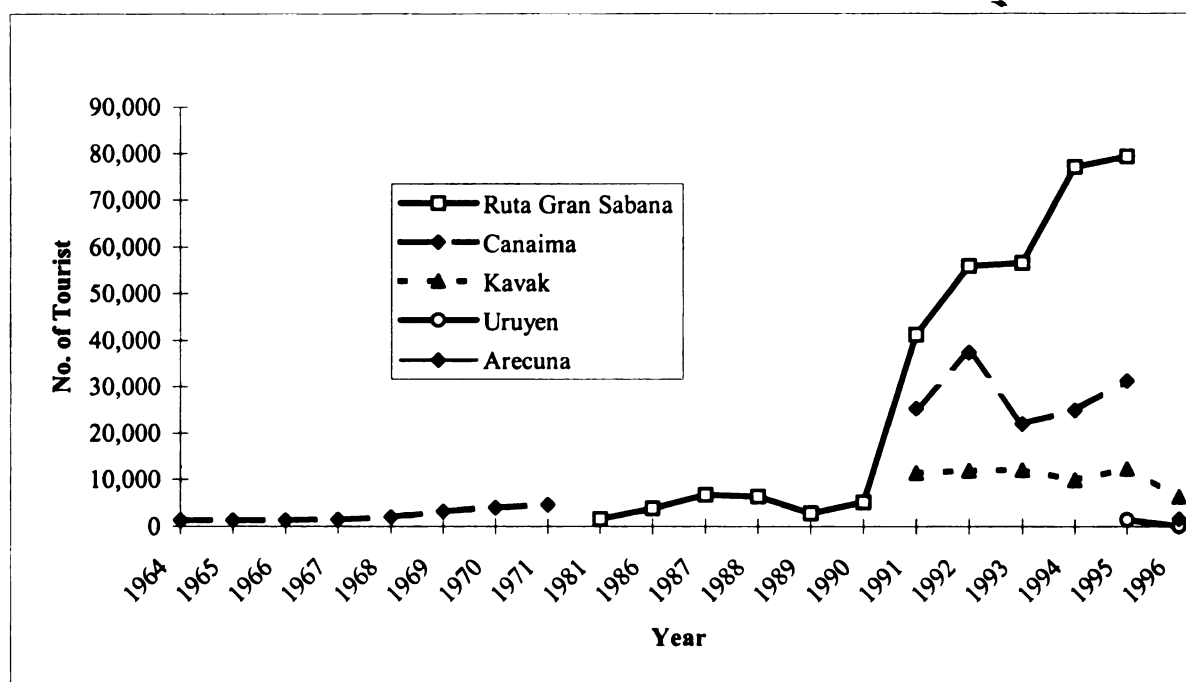


Figure 5.1 Tourist visitation at different destinations within Canaima National Park 1964-1996

Canaima lagoon was the most important destination in the park in terms of arrivals until the inauguration of the paved road of the Gran Sabana in 1991 (Figure 5.1). Since then, the accessibility of the eastern sector by car has greatly increased tourist

demand, mostly domestic Venezuelan. In 1964, the park was only accessible by air. The Gran Sabana road was still under construction in 1963 by the Army Corp of Engineers, which took them 8 more years to reach the Gran Sabana plateau. One thousand three hundred and forty six tourists visited the Canaima camp in 1964 and reached 4,688 in 1971.

Based on this data, visitation levels marked three seasons. First, “high demands” season that occurs during mid-July to mid- September coinciding with the school vacation period. Second, “medium demands” season from mid-February to mid-March and a week in April. This period Venezuela celebrates Carnival and Holy Week vacations. The third season is a relatively small period that occurs around Christmas break in December and early January (Figure 5.2).

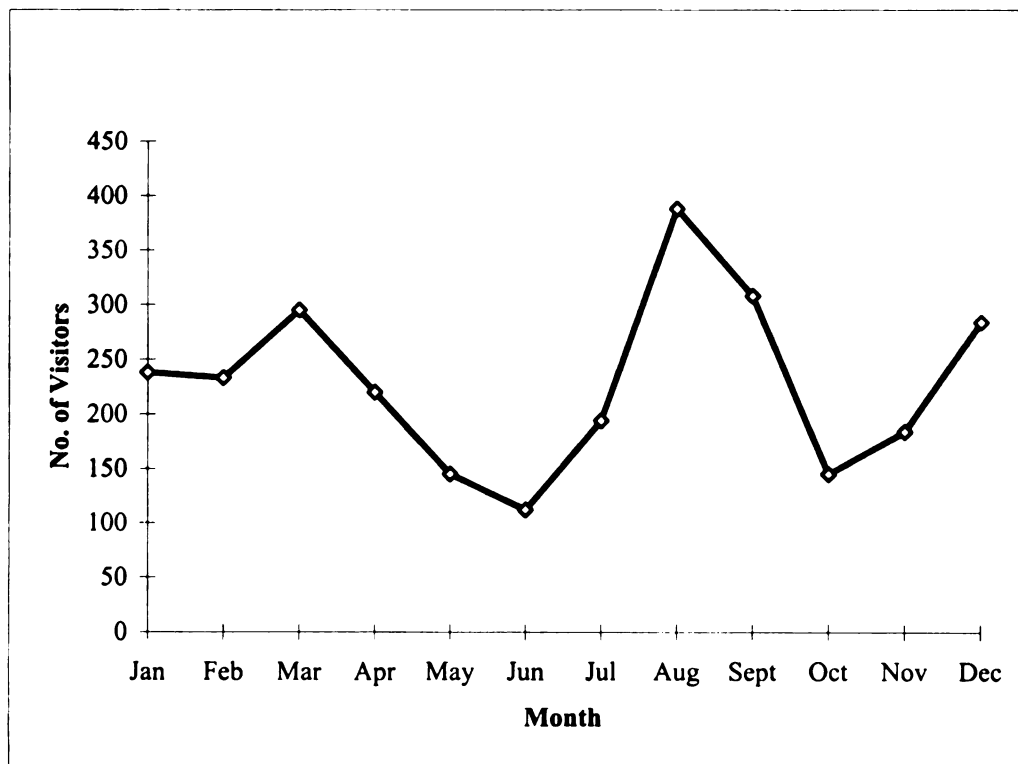


Figure 5.2 Tourist seasonality in Canaima Camp based on average visitation 1964-71

No data was available for the rest of the 70's until 1981 when the C.V.G started to survey visitors traveling through the Gran Sabana route, which was accessible only with off-road type of vehicles. In this year, 1,616 tourists visited the Gran Sabana in 405 vehicles (see Table 5.4). By 1995 the number of cars dramatically increased to 2,785 transporting 79,242 tourists.¹⁵⁹ An almost 50 fold increase in 14 years.¹⁶⁰ Indeed, since 1991 the Gran Sabana Route has represented over 53% of the visitors to the park reaching 70% in 1994 (see Table 5.5).

Table 5.4 Gran Sabana Route visitors during Holy Week 1981 - 1995

	1981	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Domestic	1,267	3,482	6,064	5,947	2,565	4,827	39,960	53,197	52,999	62,838	64,064	-
Foreigners	349	378	636	449	195	338	1,199	2,609	3,470	14,182	15,178	-
Total	1,616	3,860	6,700	6,396	2,760	5,165	41,159	55,806	56,469	77,020	79,242	-
No. Vehicles	405	974	1,578	1,378	606	1,044	1,502	2,454	2,647	2,822	2,785	2,425

Source: Data 1981-1990 C.V.G Encuesta de Viajeros Ruta Gran Sabana; Data 1991-1996 Dir. de Turismo del Edo. Bolívar Tendencias del Mercado Turístico del Edo. Bolívar 1995

Table 5.5 Market Share of key destinations in Canaima National Park

	1991	% of Park	1992	% of Park	1993	% of Park	1994	% of Park	1995	% of Park
Gran Sabana Route	41,159	53%	55,806	53%	56,469	48%	77,020	70%	79,242	64%
Canaima Lagoon	25,334	33%	37,324	36%	21,910	19%	24,929	23%	31,213	25%
Kavak	11,427	15%	11,861	11%	12,031	10%	8,475	8%	12,314	10%
Uruey	0	0%	0	0%	0	0%	0	0%	1,453	1%
Canaima N.P	77,920	100%	104,991	100%	90,410	76%	110,424	100%	124,222	100%

Source: Data 1991-1996 Dir. de Turismo del Edo. Bolívar Tendencias del Mercado Turístico del Edo. Bolívar 1995

Since 1991, more systematic data gathering has been available from different sources including data on different destinations in the park, allowing for a preliminary

¹⁵⁹ This data certainly contradicts (Huber, 1995) data that estimates that 20,000 to 30,000 vehicles visit the Gran Sabana during peak season with an average of 5 passengers.

¹⁶⁰ This increase in tourist visitation needs to be analyzed considering two factors. First, the data up to 1990 is collected by the C.V.G, and the Tourism Direction of the Bolívar State collected the following years. It is possible that both institutions had different methods for gathering their data, making the trend analysis limited. Second, the road to the Gran Sabana was finally paved in 1990 and this might explain the abrupt increase in visitation given the improved accessibility to the area.

estimate of overall visitation levels. Between 1991 and 1995 the number of visitors in Canaima National Park increased from 77,920 to 124,222 at a 9.7% rate of change per year. This data still underestimates the annual visitation because is provided only by registered tour operators. Also, because the data from the Gran Sabana route only includes information from the Holy Week vacation period and does not include visitation year round nor visitors entering the park from the north of Brazil.

In terms of foreign tourists, in 1995 approximately 80% of Venezuela's international market came from 10 countries, mainly from North America (U.S & Canada), Europe (Holland, Italy, Germany, France, Spain and England), the Caribbean (Trinidad & Tobago) and South America (Colombia). All the countries but Colombia and Trinidad are considered "high income" economies with a GNP/capita that range from \$14,510 to \$28,740 (see Appendix 5.4).¹⁶¹ Colombia and Trinidad are adjacent to Venezuela explaining their high tourist visitation level (as expected by the distance-decay model in tourism geography). Since 1986 all these countries have ranked within the top ten with the US and Holland as the first and second most important markets of Venezuela, representing a third of its international market. Focusing on Canaima National Park, international tourists have represented a significant portion of its demand. Overall international tourists represented between 38 and 46 percent of all tourist arrivals between 1991 and 1995 (see Appendix 5.5). However if we look at specific destinations like the *Canaima Lagoon*, *Kavak* and *Uruyen* (all located on the western sector of the park) a different pattern is defined. International tourist have represented in the same period between 80 to 91 percent of arrivals for *Canaima Lagoon*; 99 to 100% for *Kavak*

¹⁶¹ Interestingly, this pattern of North American and European tourist arrivals resembles the global tourist movements and spending patterns (WTO, 1996, 1997)

and 96% for *Uruyen*, making these destinations elite places. Conversely, in the *Gran Sabana Route* that is much more accessible, international travelers have represented a small portion of the visitors but have increased greatly their share in 1994 and 1995 reaching 18 to 19% of visitation.

Looking at specific cases, Germany, Spain, Venezuela, Japan and England made 80% of the Canaima lagoon market in 1995 in which Japan and Holland emerged as the fastest new growing markets (see Appendix 5.6). Similarly in Kavak, England, Germany, Spain and Italy represented more than 91% of the market in the same year (see Appendix 5.6). England showed the fastest growing market while the visitation levels of Italy and the US dropped significantly (55.2% and 73.5% respectively) in one year (1994-95).

There is no direct data collected to have an idea of the demographic profile and characteristics of international tourists to Canaima National Park. However a survey in Bolivar State conducted by the Bolivar Tourism Direction between November 1994 and August 1995 (Bolivar, 1995) can provide us with certain approximation given the large tourist market share of the park within the Bolivar State. The survey shows that 64.5% of the market are women; 52.3% are married; 61.5% fall within 25 and 44 years of age; 73.4% are employed; 66.5% have university degrees; 88.8% travel accompanied by 2 to 3 people; 42.9% stayed in camps; 36.4% visited Canaima National Park (12.7% Gran Sabana Route, 18.6% Canaima Lagoon and 5.0% Kavak); 24.3% are German followed by 11.9% from Spain and Italians represent 11.5%; 64.7% of the sample have an average annual income of over Bs.10,200,000 (\$57,692 at an exchange rate of 176.8 in 1995) and 50.1% had an average spending of over Bs.105,001 (\$594) during their visit (Bolivar,

1995). This profile resembles the profile of international and domestic tourists who visits the Brazilian Amazonia (Ruschmann, 1992).¹⁶²

The expansion of tourism operators to periphery areas within Canaima follows what could be a pattern of development proper of the industry within a State owned property (i.e., National Park). This means that these resources start to become an “open access resource” with little State capacity to manage and monitor such development. Many international and national tourism enterprises and agencies are establishing, operating and extending “ecotourism” systems in Canaima looking for remote and unique destinations within the park in order to keep exclusivity and elude the great concentration of visitors that are arriving (Bacci, 1994). In 1996 there were 10 concessionaires, 7 others operating without a contract and 42 operators with commercial use licenses (Cordero, 1996).¹⁶³ Concessionaires refer mainly to air transportation and lodging and commercial use license refer to ground transportation. Given the limitation of INPARQUES to control the extension of the park and entrance to the park by air, these statistics certainly do not include small illegal aircraft operations and all other indigenous peoples’ tourism enterprises. As Miranda (1998) explains, the concessions are granted not through an open bidding process but because of private agreements between INPARQUES and the tourism enterprises with no fixed fees or royalties.¹⁶⁴ In addition, many of these tourism

¹⁶² Normally these types of comparisons are hard to make given the variety of data categories that are collected across studies of tourist demand and profiles.

¹⁶³ These operators must also be registered at the State Tourism Registry according to the Bolivar State Law. In 1995, 177 tourism enterprises (i.e., Travel Agencies, Travel Agencies & Tourism and Tourism Transportation) were registered while 43 were in the process of getting registered. Of those registered, 89% of them are from the Bolivar State. All of these enterprises are linked to 28 international tourism wholesalers in Germany, Austria, Belgium, Canada and the U.S, with offices in Caracas, Valencia, Puerto La Cruz and Margarita Island (Bolivar, 1995).

¹⁶⁴ Despite this, concessions and operators fees seem to be an important source of income. Concessions and operators pay in total Bs. 54,372,000 per year (\$130,295 at an exchange rate of 417.3 for 1996) to INPARQUES that represent 32% of the self-generated income of the park. This income is 26 times the basic operational budget of the INPARQUES Regional Office (Bs. 2,100,000 ~ \$5,032). However, this

enterprises and agencies are operating without being properly evaluated in terms of their contribution to the conservation of the park and in terms of how much they benefit local communities. Under Venezuela's Law of Tourism (Articles 59 and 60), prior consultation with indigenous communities is explicitly required before any tourism development can go ahead in their areas. Unfortunately, these consultation procedures are not a common practice in National Parks and indigenous communities are marginalized from any decision making regarding tourism development in the lands they occupy.¹⁶⁵ Similarly, given the restrictions that the National Park set for human settlements in their boundaries, and the limitation of the environment for traditional ways of life, an increasing amount of indigenous people are looking at tourism as an option for development. Many communities are soliciting permits from the park service (Morales, 1994 personal communication) for tourism purposes or are establishing contracts with regional and national inbound tour operators. Most of these communities depend on national and international outbound tour operators for tourist contact, goods and supplies. These communities have little control over the tourism activity and have limited capacities to comply with the park's concession laws and State registration standards. Moreover, they are not fully aware of the potential negative impacts of tourism for the community and its natural environment.

income is not allocated back to the management of Canaima National Park. Instead it goes to subsidize the management costs of other remote or less visited parks without defined budget allocations.

¹⁶⁵ An example of this was an authorized construction of a Tourism Camp (Aventura Gran Sabana) in Sierra de Lema (point of entrance to Canaima) by a private consortium *Turisur*. The plan was authorized by INPARQUES after a criticized environmental impact study. This created a conflict with 48 indigenous communities that live in the Gran Sabana Municipium who mobilized to put a halt to the proposed camp. Complying with the articles 6 and 52 in Canaima's management plan they denounced the project arguing it would generate environmental deterioration plus it violated article 60 of the tourism law. Furthermore they argued that the consortium did not conduct the most important study, a social impact assessment and that it did not consider the communities' capitane observations and decisions against the project. A big concern of the communities was the long-term impact of the camp in attracting other multimillionaire enterprises

The increasing inflow of tourist and the uncontrolled expansion of tourist operations in different parts of the park have made tourism a major problem for the protection of park resources and indigenous communities. Several studies have noted the environmental impacts generated by tourism activities in the park and have recommended environmental impact assessment and tourism carrying capacity studies (Bacci, 1994; Cabrera, 1991). Some of the environmental and socio-cultural impacts in the park that have been documented include: new hiking trails and off-road vehicles paths; littering, human waste and fires; removal and collection of animals, plants (e.g., orchids and bromeliads) and rocks (e.g., pieces of *jaspe* stones and quartz crystals); climbing tepüis (which is prohibited by INPARQUES since 1989), crowdedness and trampling on tepüi summits; accidental translocation of endemic species from one tepüi to another; and, tourism development schemes, tourist, and indigenous communities conflicts (Rodriguez, n/d ; Rodriguez and Sharpe, 1996b; Cabrera and Jaffe, 1991; Salazar, 1995; Huber, 1995; Schubert and Huber, 1989; Cordero, 1996; Rodriguez, 1997).

5.3 The Tourism System in the Kamarata Valley: the supply-side

Key to the global-local linkage of tourism and specifically ecotourism operations are the tour operators that play the role of gatekeepers in the industry having great power in controlling the tourist origin-destinations flows (Ioannides, 1998). Also in controlling the degree of economic benefits for host destinations (Britton, 1982; Britton, 1989; Brohman, 1996). This understanding is derived from structural tourism models in geography that have looked into relations between origins and destinations from a core-periphery framework (Hills and Lundgren, 1977; Britton, 1980; Pearce, 1995).

and then displacing Pemon of their ancestral territories (Echezuria, 1996; Jimenez, 1996; Aristeguieta,

In this line, the power of tour operators stems on their capability in packaging tourism experiences and sell them directly to potential tourists or through travel agents at a discount prices (Britton, 1991; Ioannides, 1998). Indeed this role of the tour operators and power relations puts this sector along with the international airlines, and hotel chains at the center of the political economic analysis of tourism in the so-called third world (Mowforth and Munt, 1998). The main critique being that destinations are dependent on the flows of tourists, tourism resources and capital, which are managed and controlled by these sectors who have the financial capacity, technology and resources to control the system, have access to and direct the market (Mowforth and Munt, 1998; Britton, 1989). In many cases small operations in periphery countries do not have the capability to market themselves abroad and need to engage in business relations with foreign tour operators and adopt foreign values and solutions to satisfy the tourists and the tour operators (Pearce, 1995). This puts the tour operators in a better bargaining position to ask for better rates, commissions or concessions (Ioannides, 1998).

This section goes back to Britton's question (chapter one) on how the industry manifests itself in the structural context (historic, political and economic) of a specific destination, the power relations its exercises and who benefits from its development activities. It has already been discussed the context in which tourism development takes place within Canaima National Park. In this section, the supply-side or tourism business structure in the Kamarata Valley is addressed, examining the interrelationships between the components of the structure. For this, (Higgins, 1996) conception of the economic structure of nature tourism is used in which he defines four components: the ecotourists,

1996; Ledezma, 1996; El Progreso, 1996).

the outbound nature tour operators, the inbound nature tour operator and the local nature tour operator.¹⁶⁶

5.3.1 Ecotourists

The main tourist destinations in the valley are *Kavak* and *Urúyen* and together they receive 11% of the visitors to the park. These destinations are elite places given that almost all of their visitors are foreign tourists coming from England, Germany, Spain, Italy, United States, Canada and other countries representing 98.5% of the market. Little is known about the profile of tourist that visits Canaima. As discussed earlier, the survey conducted by the Bolívar Tourism Direction between 1994-95 show a profile that resembles the profile reported elsewhere for nature-based tourists in terms of age and education. However, the income level reported by this survey for the Canaima tourists is very low and does not conform to the profile that is expected from ecotourists. Observations for Kamarata are that the majority of the tourists that visit the valley are mid-centric types of tourists (to use Plog's (1991) definition) instead of the allocentric type that would be expected from an ecotourist. These visitors seem attracted and willing to enjoy the discovery of new experiences in remote natural and cultural areas that seem out of the tourist path. Yet, the majority made their travel arrangements through tour operators that market Kavak from abroad (i.e., United States and Europe). If there were tourists arranging their own itineraries they still needed to purchase a package directly to the inbound tour operators to go to Canaima and visit Angel Fall and the Kamarata Valley from Margarita Island.

¹⁶⁶ Higgins develops this economic structure of nature tourism from the works of (Ashton and Ashton, 1993; Fennel & Eagles, 1990; Ziffer, 1989). These authors were among the first to examine the business structure of the ecotourism business.

The majority of the tourists observed arrived in Margarita Island (the main tourists destination in Venezuela) were middle income, on holidays, spending one to two weeks looking for sun, beaches and comfortable hotels and good local food. The highlight of their trip was to be able to spread their dollars in engaging in short, mildly intensive and relatively cheap adventurous type of experiences.

5.3.2 Outbound nature tour operators

The business of outbound tour operators is to package tours from abroad to nature-tourists destinations. They select destinations that accommodate their needs, arrange itineraries, contract airlines and lodging facilities, mediate marketing and sales, attend individual clients and organize travel groups (Higgins, 1996; Ioannides, 1998). As Britton and Higgins explain, they make the link between ecotourist generating countries mostly “first world” or industrialized countries and the nature tour operator and “ecotourist” destinations in periphery countries (which tend to be nonindustrialized).¹⁶⁷ Moreover, outbound operators if they do not contract airlines, lodging facilities, inbound and local tour operators, they tend to own and manage these in the host destinations. In the first case they have less control over the system and over the quality of the tourist experience and rely on the performance of the different components of the system to maintain the business. Yet, in the distribution of the tourist dollar is greater with greater secondary economic impacts. In the second case they have better control over the system but the economic benefits to the local destination is reduced. In general, there is little

¹⁶⁷ The few surveys of specialty tour operators show a reverse geography of tourist flows compared to the normal patterns of mass tourism. Central America and South America constitute the major flows of nature tourists (Higgins, 1996).

loyalty of outbound tour operators to specific destinations. This is because the sector is extremely competitive and volatile and to avoid high risks in the business (i.e., changes in consumer preference, political and economic instability in destinations, unfavorable business relations, high inflation, quality of services contracted, environmental deterioration, etc) tour operators tend to market multiple substitutable destinations (Ioannides, 1998). However surveys of specialty tour operators such as those that arrange adventure and ecotours show that these tend to be independent with little horizontal and vertical integration and are more loyal to specific destinations. This is because they have less bargaining power than larger wholesalers and their business depend on one region, they market specific destinations and not simply types of holidays and they attend niche markets which search for unique experiences (Ioannides, 1998). Despite this difference in behavior between large firms and specialty travel operators still their behavior cannot be generalized. The reason is that both are after keeping profits and their actions and local economic benefits are context specific and will still depend on how actually business relations are established and evolve in specific localities.

The Specialty Travel Index Online, a directory of 600 tour operators, adventure vacations and special interests travel world wide has become the sampling frame of many survey studies of this segment of the industry. In searching this database for Venezuela and consulting other ecotour books (Foehr, 1993) resulted in 25 outbound tour operators that market Venezuela in 1996 (see Appendix 5.8).

Of the 25 outbound tour operators 22 have their headquarters in the United States, one in Canada and two in England. The majority (18) marketed multiple regions, three marketed Central and South America destinations, one marketed South America only and

three specifically marketed Venezuela. Of those that marketed Venezuela, they targeted multiple destinations within the country. At least three of the operators have offices or coordinators in Caracas (i.e., Eco Voyager, Lost World Adventures, Mountain Travel/Sobek Expeditions) functioning at times as inbound tour operators.

The majority of outbound tour operators that market Kavak have to go through the Venezuelan inbound tour operator LTA (that has the tendency to monopolize the system) to be able to arrange packages to the area. For many tourists that arrive in Venezuela, travel arrangements with tour operators are the only way they can spend their dollars. In this way they take advantage of discount prices, stay up to two weeks and make quick visits (one to three days) to remote and unique natural and cultural areas such as Angel Falls, Kavak, Los Roques, etc.

5.3.3 Inbound tour operators

According to Higgins, inbound tour operators, which are poorly studied, are generally located in urban areas and tend to specialize in services within one or more countries. They market their services to outbound operators and to travelers directly, arrange itineraries and programs and establish business relations with local operators, hire personnel, and pay the fees. Higgins points out that an important issue to analyze is the upward linkages, that is, how the type of ownership, with its predetermined relationship to the global structure of ecotourism, influences the management of the business and the character of nature tourism. Similarly, backward linkages need to be observed, that is economic ties with local business within a country. In studying how the tourism manifest itself, the type of institutional arrangements of business relations between operators at

different levels needs to be assessed. More importantly, their differential impacts within an ecotourism operation need to be assessed.

In the Kamarata Valley, there were mainly seven inbound tour operators in 1996 (Table 5.6). Three have headquarters in urban areas such as in Caracas, Margarita or both (LTA-Aerotuy, Rutaca and Servivensa), two other operates from Ciudad Bolivar (Shaliliko and Ottotour) and one operates from Canaima camp in the park and could be considered a local family operation (Hermanos Jimenez).

Table 5.6 Inbound tour operators in Kamarata

Operator	Type of Operator	Operation	Services
LTA	National owned independent operation and joint venture	Multiple destinations in and outside Venezuela	Airline Transportation, Ecotour Lodges and Yacht
Rutaca	National owned independent operation	Multiple destinations	Airline Transportation
Servivensa	Subsidiary of a national airline corporation	Multiple destinations	Airline Transportation
Transairtepyu (Aerotuy)	Subsidiary of a national corporation	Circuits -Canaima National Park	Airline Transportation
Hermanos Jimenez	National owned independent operation	Canaima National Park	Airline Transportation
Shaililiko	Small foreign own operation	Canaima National Park	Ground and river operation
Ottotour	Small foreign own operation		Ground and river operation

All but two of the operators are national owned independent operations. Yet LTA maintains a joint venture with an outbound operator from Seattle USA (Tropical Adventures Travel) and could be considered a subsidiary of an outbound operator that specializes in Venezuela. Moreover, they market to other operators in Europe. Servivensa

on the other hand is a subsidiary of a national airline corporation called AVENSA, which also has another subsidiary –Horturvensa- that runs hotels around the country including the world known Canaima camp. The largest operators (LTA, Rutaca and Servivensa) market multiple destinations in Venezuela and the rest focus exclusively on Canaima. Five of the operators are mainly airlines but have expanded their business by managing their own lodges or camps such as LTA and Hermanos Jimenez. For their operation to Canaima, LTA and Rutaca transport tourists mainly from Margarita Island, which is a free port destination and the first in tourist's arrivals in the country. In addition, they operate from Ciudad Bolivar de capital of Bolivar State.¹⁶⁸

Avensa fly from Caracas and Ciudad Bolívar and Servivensa and the Hermanos Jimenez arrange DC-3 and Cessna flights respectively from Canaima resort to other destinations in the park. The last two Shaililiko and Ottotour are small foreign own operations of ground operations that subcontract flights to Canaima from Ciudad Bolivar (Rutaca and Servicios Caicara) and then indigenous river transportation from Canaima. Ottotour owns a *curiara* with outboard motor and then contract with locals in Kamarata to operate the transportation for tourists.

LTA-Aerotuy is the largest and best organized inbound tour operators and has greatly invested in marketing Canaima National Park, Angel Falls and the Kamarata Valley, which have benefited all the operators. The company offered relatively cheap tickets for a one to three day trip from Margarita Island. The majority of tourists would buy the “ecotourism” packages that would take them by plane to fly over Angel Falls and land in Kavak in the Kamarata Valley leaving in the morning and returning in the

¹⁶⁸ In 1996 LTA moved their operation from Ciudad Bolivar to Ciudad Guayana, which is the major industrial zone of Bolivar, shifting the market and leaving behind many small travel agents that benefited

afternoon. The main experience includes arriving at an “Amerindian village”, visit Kavak canyon guided by bilingual guides and indigenous guides, eat “indigenous or local food” and buy local arts and crafts. The experience is low to mid activity levels with low risk.¹⁶⁹

5.3.4 Local Nature Tour Operators

Local tour operators are local businesses in or near ecotourist destinations that can be owned by business groups from the local to the international level. They provide services to ecotourists such as ecolodges, private nature reserves, food and drinking services, transportation, supplies and guides (Higgins, 1996). As Shaw & Williams (1998) pointed out, part of understanding tourism impacts is to consider the nature and role of entrepreneurs in the product development life cycle among other aspects which has been neglected in the literature. Also importantly is the role of local entrepreneurs in the local community. Knowledge in this regard is limited to studies of coastal resorts and it needs to be extended to other tourism sectors such as nature-based tourism (Shaw & Williams, 1998). Entrepreneurs serve as brokers between host communities and tourists and their role is conditioned by whether they are a local or external initiative (Shaw & Williams, 1998). Entrepreneurial development is linked to the exploration and involvement phase of Butler’s evolutionary model. Both Butler (Butler, 1980) and (Din, 1992) believe that entrepreneurial development is a spontaneous process, which occurs as a consequence of a growth in tourist demand in the early stages of tourism development.

from the flow of tourists to the capital.

¹⁶⁹ Again the tourists that visit Kavak resembles more the midcentric type of tourists according to the evolution model of (Plog, 1991). However, this may reflect more the packaged strategy “not too exotic nor too familiar” to fit this market than the true nature of the stage of development of the destination or tourist’s personality and motivation.

Entrepreneurial development can occur through local efforts, which includes initiatives from community members who have been exposed to tourism experiences elsewhere and are aware of its potential. On the other hand it could be an external business initiative that then triggers local or regional entrepreneurial efforts. Again the concern in the political economic analysis of tourism is the nature of these entrepreneurs and their business relations, and the context and economic structure in which they operate. These factors are central to the issues of ownership, control and dependency and impacts of tourism (i.e., economic leakages, community participation, etc.)

In the Kamarata Valley where there once was one local operator there are now six local tour operators and other two under planning, all owned by local people and the majority linked to inbound operators and indirectly with outbound tour operators (see Table 5.7 and Table 5.8). More specifically five are family owned and one is a community enterprise (*Kavak-Yeuta Civil Association*).

Table 5.7 Local tour operators in the Kamarata Valley

Local Tour Operators	Ownership	Operating since
Excursiones Pemón (lodging, food and guide services)	Family owned	1989
ACKY (Kavak-Yeuta Civil Association) (lodging, food, car transportation and guide services)	Community own	1979/1991
Makunaima (lodging, food, river transportation and guide services)	Family owned	198?
Yuruán Camp (lodging, food, car transportation and guide services)	Family owned	1996
Aicha-wena (lodging, car and river transportation services)	Family owned	199?
Pitüpü Camp (lodging, porter and guide services)	Family owned	1996

Three tourist camps (*Kavak*, *Yuruán* and *Pitüpu*) with different levels of tourism development function in the valley. In 1996, Kavak had been in operation for more than 15 years; Uruyen and Pitüpu recently started their operations. National inbound tour operators (under concession with the park service) operate in Kavak and Yuruán camps under contract with local tour operators. In Kavak operates the *Kavak-Yeuta Civil Association* (ACKY), which is a community-based enterprise and two other local family owned businesses (*Excursiones Pemón* and *Makunaima*) run by family members.

Table 5.8 Linkages between Outbound, Inbound and Local Tourism Operators

Upward Linkage	Inbound Tour Operators	Local Tour Operators	Main attractions and site of operation
Int'l and Nat. operators, travel agencies and individual travelers	AEREOTUY (Margarita, Cd. Bolívar, Canaima)	*ACKY *Yuruán Camp	Kavak gorge Uruyen savanna and Yuruán <i>Akareupa</i> Falls
National operators and individual travelers	Hermanos Jiménez (Canaima)	*Excursiones Pemón	Kavak gorge
Int'l and Nat. operators, travel agencies and individual travelers	Servivensa (Canaima)	*Makunaima	Kavak gorge
Int'l and Nat. operators, travel agencies and individual travelers	Transairtepuy (Aerotuy)	*Pitüpu Camp *Makunaima *Aicha-wena	Circuit to Kamadak, Pitüpu, Angel Falls
Nat. operators, travel agencies and individual travelers	Shaililiko / RUTACA or Servicios Caicara (Cd. Bolívar)	*Makunaima	Aicha-wena, Guayaraca and Kamadak
Nat. operators, travel agencies and individual travelers	Ottotour (Cd. Bolívar)	*Pitüpu Camp *Makunaima lodge *Independent river transp.	Pitüpu and Angel Falls
Mountain Travel/Sobek Expeditions	Mountain Travel/Sobek Expeditions / RUTACA	*Aicha-wena *Excursiones Pemón *Independent porters	Angel Falls, Guayaraca and Auyantepüi
Int'l and Nat. operators, travel agencies and individual travelers	RUTACA (Margarita, Puerto La Cruz, Cd. Bolívar)	*Excursiones Pemón	Kavak gorge

The ACKY works exclusively with LTA, which has helped fund the kitchen resources of the Association and at times have contributed to the maintenance of the airstrip in the benefit of all the other operators. Also, LTA has hired one Kamaracoto as part of its staff and trained him as a bilingual guide to work in various destinations.

In Uruyen, the camp is run exclusively by LTA, also, as a concession with the park service and in contract with one locally owned family tour operation. LTA helped this family in the design and funding of the infrastructure of the Yuruán Camp. The third camp *Pitüpü* can only be reached by hiking and it is located on a mountaintop in the *Sertepüi* range facing the *Auyantepüi* at an altitude of approximately 950m close to an old diamond mining area. This camp is a local family owned tour operation with no specific linkages to inbound tour operators.

Tourism transportation into the valley occurs through daily flights year around from Margarita Island, Ciudad Bolivar, Ciudad Guayana and the tourism center of Canaima. Likewise occurs by dugout boats from Canaima up the Carrao River passing Angel Falls then up the Acanán until reaching the Kamarata savanna.

Following is a brief history of the development of tourism in the valley to understand the evolution of tourism in the region as well as the role of the different entrepreneurial agents that are pushing the valley into a tourism economy.

The history of tourism in the Kamarata valley is based on secondary sources and accounts of two informants. One is Lino Figueroa a high school teacher in Kamarata who had the opportunity to study some years in the US with a government fellowship, which ended before finishing his bachelors in Engineering. He then returned and worked in Canaima in 1976 with his cousins in one of three first local tour operators in Canaima

camp. He was allowed to initiate the tour operation which he named *Kamaracoto tours*. In 1978 Lino left Canaima and worked some months in SIDOR as a steelworker. Then he left for *El Dorado* in the Gran Sabana specifically in San Antonio de Roscio and stayed with an uncle. Here Lino with his experience in US National Parks (Colorado) and then in Canaima influenced his uncle to develop a tourist camp in *Kamá* along the Gran Sabana road. He helped in the construction of the camp that eventually evolved into an attraction becoming a tourist image for the promotion of tourism in Bolívar. Lino left *Kamá* in 1980 and worked in the gold mines of *Chikanán* around the Cuyuní areas for a year. He went back to Ciudad Bolívar in 1981 and found out that Father Victor of the Kamarata mission was looking for him to open a high school in Kamarata, which he accepted. Lino eventually became secretary for the *capitán* and then he was *capitán* and then secretary of *Kavak-Yeuta Civil Association*.

The other informant is Casilda Berti. She also is a schoolteacher and community leader in Las Malocas, a Pemon Kamaracoto community that developed annexed to the Canaima camp. Casilda is the oldest of a large traditional family in Kamarata, which the head of the households is the current *capitán* general of the valley. She grew up in Kamarata and studied in the Kamarata mission and then as an intern in Santa Elena de Uairén. She returned to Kamarata and worked as a teacher and she became secretary for the *capitán* and then she was *capitán* for a short time promoted by the sisters in the mission. Then she got married and settled in Las Malocas.

5.4 Brief History of Tourism in the Kamarata Valley

The *Línea Aéropostal Venezolana* (LAV) started operating in the Gran Sabana region in 1936 covering a route called the “*Ruta Social*” or social route to support the

mission's activities and the development of the region. LAV used to travel to places such as Tumeremo, Santa Elena de Uairén, Kavanayén, Kamarata, Urimán and Wonkén using Twin-Otter airplanes with capacity for 20 passengers.

Organized tourism activities per se started in 1954 with Canaima camp and later on with the Ucaima camp along the Carrao River, both own by foreign entrepreneurs residing in Venezuela. Canaima National Park was created in 1960 and expanded in 1975, which helped to promote and create a strong and permanent image of the park worldwide especially of Angel Falls. Canaima camp operated mostly as a Hotel and organized curiara trips across Canaima lagoon. *Canaima tours*, *Hermanos Jimenez* and *Kamaracoto tours* were among the first local tour operators that worked with tourists that stayed in the Canaima hotel and extended tours to Angel falls starting in the mid 70's. Spaniards owned *Canaima tours* and was the first operator organized. The other two were created later. *Hermanos Jimenez* was owned by criollos and *Kamaracoto tours* by Pemon. Canaima camp grew with Pemon staff who migrated from the Kamarata Valley and created a town called *Las Malocas* one-side the tourist camp. The success of the camp created a spillover effect later on in other sectors in the park by stimulating entrepreneurship development mostly by foreign initiatives.

A cartographer and explorer called Alejandro Laime (nicknamed "El Polaco") played a roll in the history of tourism in the Kamarata Valley. Laime was believed to be a Lithuanian migrating from English Guyana escaping from the Second World War. He was known to have participated in a 1937 expedition to the Kamarata Valley and the Auyantepüi with James Angel, Gustavo Henry and Félix Cardona. Laime became famous because he also participated in Ruth Robertson's world known expedition in 1948. The

expedition went from the base camp in Uruyen to Angel Falls to measure for the first its height from its base (Robertson, 1949). This expedition was then published in the National Geographic Magazine in 1949. According to Lino, Laime told him that he was the founder of Canaima Camp and that he was the one responsible for demarcating its airstrip.

Between 1956 and 1958 Laime built a *churuata* in Uruyen for tourism purposes and operated it for two years. American tourists among others were transported by an airline called TANCA and Laime run day-tours types of operations. However, Laime tourism activities generated some problems. Two Kamaracoto women were encouraged by tourists to drink alcohol in a party. They engaged in sexual intercourse and is believed that the women were given some type of sexually transmitted disease. This caught the attention of *capitán* Alejo Calcaño whom with a revolver and a *carabina* (rifle) forced Laime out of the valley and the *churuata* was abandoned. He lived the rest of his life as a hermit exploring the area around the Auyantepüi and in *Isla de Orquidea* on the Carrao River. There is even a “mirador” named after him. The new Yuruán camp in Uruyen is located in the same site of Laime’s tourism operation.

Both Lino and Casilda agree that the story of tourism in the valley really started in 1973 when Father Victor of the Kamarata Mission in his search for a stream or waterfall in the Auyantepüi to be used to develop a water system rediscovered a sacred canyon called *Kavak-Yeuta*. This canyon was a site known only by few people mostly shaman. It was a prohibited place. People were fearful because it was a place of evil spirits. The first that noted the tourism value of Kavak –Yeuta is Father Victor. During the construction of the water system that lasted until 1974, everybody started discovering the Kavak canyon.

Lino speculates that the tourism potential must have been noted both by Father Victor and by the maintenance chief of the mission called Victorino. He explains that Victorino, because he was a foreigner and was from Spain, must have had experience with tourism. Yet entrepreneurial ideas could have come from Canaima and Ucaima that had been in operation for almost 20 years and many people from Kamarata were working in those camps as employees.

Father Victor became ill between 1974-75 and left for Spain. People interpreted his illness as related to his explorations to the sacred site of Kavak-Yeuta. Father Quintiliano de Zurita who came from the mission in Wonkén then substitutes for Father Victor. It is Father Quintiliano and Victorino who started tourism by allowing visitors to stay in the mission. They provided food and gave trips in the mission's jeep to Kavak-Yeuta. A pilot called Boris Kaminski, probably starting in 1975, transported the tourists with his own plane and landed in the Kamarata airstrip. Kaminski known as "a legendary jungle pilot" is a Yugoslavian who made his living opening new areas for tourism and other activities.¹⁷⁰ According to my informant, Kaminski considers himself a pioneer in bringing tourists. He was friend of the missionaries because he was a veteran pilot and probably assisted the mission with transportation needs or bringing in supplies in many cases. Kaminski would bring tourists two to four times a year and probably Americans and Germans because they were the types of tourists he was used to working with.

¹⁷⁰ Indeed in 1996 *Lost World Adventures* an Outbound tour operator from Marietta, Georgia, USA, was promoting through Internet a trip to visit the Höti, who are indigenous people in the Maigualida Sierra in Bolívar State. Again Kaminski was the person of contact personally renting seats of his plane to an outbound tour operator and transporting "ecotourist." This resembles the activities of bush pilots in the 30' 40' and 50' that were looking for gold, and diamonds and development opportunities. In this case is tourism in the Venezuelan Guayana. Kaminski continues bringing tourists to sites little explored where there is no congestion such as the one that Kavak is now experiencing.

Probably comments about the discovery of Kavak-Yeuta or the tourist experiences at the site reached Canaima camp through tourists passing by or by the same Kamaracoto. This caught the attention of Captain Martinez, a high level executive of the AVENSA, a company owned by the Boulton family. Martinez travels to Kamarata with his own private plane and join Father Quintiliano and Victorino in a proposal for a hotel in the valley. Lino argues that Martinez was an employee of AVENSA but he knew how the Boulton started with the Canaima camp and he had his aspirations of developing something of his own. Martinez in a trip back to Kamarata traveled with a National Guard to talk with Father Quintiliano. Instead, he found Father Victor who returned in 1976. Martinez presented him with the business proposal arguing its economic potential. Martinez stated that if there is an agreement, then the Indians could build a *churuata* and he could be in charge of transporting the tourists. Father Victor stopped him there and said that he was no owner that he was a foreigner and asked them to talk directly to the *capitán* of Kamarata Antonio José Calcaño. Father Victor seems to have been advising the Kamaracoto to study and prepare themselves because one day what was coming was *candela* (fire). Calcaño met in the mission with Father Victor, Martinez and the National Guard. Lino explains that Martinez tries to buy Calcaño by explaining to him about the tours, how the community was going to benefit and so on. Calcaño realized that he couldn't accept the proposal. He interpreted the proposal, as changing gold for mirrors again and he said no. The outsider's aspirations seem to have ended here. Yet Calcaño here captured the idea of self-management.

The news about the canyon attracted other local operator such as Hermanos Jimenez who came once with Martinez. This operator was an official operator in

Canaima and started making sporadic trips to the Kamarata mission, recruiting tourists in Canaima. Father Victor allowed the visits to Kamarata because it was a National Park and because the only thing he did not approve was the hotel. Day trips were the only possibilities because there was no place to stay. Saúl Jimenez one of the owners of the Jimenez operation tries to convince Calcaño to build a *churuata* so he could bring tourists. Calcaño perceived Saúl as more believable than Martinez because Saúl was from the area. Although, Saúl's idea was that the Kamaracoto build a *churuata* and then sell it to him. Calcaño felt that this proposal was an attempt to invade the area and he rejected the idea. However, he knew that eventually a *churuata* needed to be built.

Soon after Kaminski in one of his trips landed in Kamarata with tourists but the mission's vehicle had broken down. Father Victor despite rejecting the stay of visitors in the mission and fighting against the construction of a hotel, he allowed the use of the mission's jeep to transport tourists to Kavak. The operators would pay him for the trip plus gas. Once Kaminski realized that the jeep was not functioning, he decided to fly over the savanna near Kavak with another experienced pilot called Arjona. After several turns he decided to land and became the pioneer pilot of Kavak. From this moment small planes started to land in Kavak.

Parallel to this, Lino claims to have been probably the first to bring tourists by river in *curiara* from Canaima to Kamarata and vice versa in five days when he worked in Canaima from 1976 to 1978. The only tours that existed at the time were a 5-day trip to Angels Falls from Canaima and back. With his enterprise Lino started to offer tours to Angel Falls of 3 to 4 days and at a lower price taking the tourists away from the other companies. This idea emerged from an English tourist that wanted to see Angel Falls

with his son but he could not or did not wanted to spend so much time. Moreover, Lino thought of a day trip to Angel Falls but the other operators quickly took his ideas. This is when the whole business started to boom rapidly, the demand increased, river trips multiplied in an unplanned and disorganized manner eventually resulting in negative impacts observed today.

Capitán Antonio José Calcaño told Lino that he had to take his motorcycle and get out of the school (because he was a school teacher) each time an airplane was flying around. He would drive to Kavak to see who has arrived. This is when Calcaño felt obligated to talk with the community about doing something in Kavak because these people “de la noche a la mañana” (overnight) when less expected will take the area. Lino interprets this as a reaction of the *capitán* against the inevitable fact that people were going to come and that it was better to make presence and occupy the area before outsiders settle and exploit Kavak. It was a reaction against outside pressure and against what he was foreseeing. Calcaño traveled once a while to Canaima camp and knew what was going on there. Another interpretation of Lino was that Calcaño with all the pressure and bombardment of tourism development ideas started thinking of a local tour operation himself.

Subsequently Calcaño organized a community meeting. These types of meetings were often done before to organize a community-fishing event with *barbasco*, to clear forest areas for new *conucos*, for planting crops, invitation to drink *kachiri*, etc. At the time, Calcaño was the general *capitán* of the entire valley. There were no *capitán* by communities as there is today. The general *capitán*, Lino emphasizes, had the power by tradition to influence people’s behavior. Therefore, Calcaño told the community that they

needed to build a *churuata* in Kavak to say that they are there and for self-defense. He then asked Marino a resident of Wapinao to occupy Kavak, which is naturally delimited and is part of the ancestral hunting grounds of the people of Wapinao who have rights to the area. Marino settled in Kavak and in 1979 he built a *churuata* and this is where the camp *Kavak-Yeuta* was founded and named *Kavak* for the river that spurs from the mountain and *Yeuta* for the cave which is actually a canyon or gorge. Marino started by charging a fee to all visitors arriving by plane in Kavak including the pilot. When Lino returned to Kamarata in 1981 to work in the new lyceum, Marino had already three years settled in Kavak and he was receiving four to five flight a year. Lino was then asked to function as the secretary for the *capitán* so to help him with the problems in the valley.

A year later conflict started to emerge. Kaminski in one of his trips asked for a meeting complaining that Marino was charging him a fee and that this was not the way to proceed. In the following years Kavak camp was still receiving very few tourists in an annual basis.

In 1986 Lino is designated *capitán* and Calcaño who was transferring the leadership asked as a last wish that Kavak camp be closed because he started it and now that his leadership had come to an end he wanted Kavak to come to an end. Yet, Lino reactivated Kavak by convincing the community to build three new round *churuatas*, a kitchen and a dining area. Casilda explained to me that when this happened everybody participated by “*mayuu*” that is by pooling labor, skills, food and assistance. The basic idea of the Camp was that the benefits go to subsidize needs of the communities especially health. This effort resulted in high expectations from the part of the community of the benefits of tourism especially from the elders and those that were not directly

involved in tourism. In other words the community expected a return, a reciprocity of more or less equal value for their efforts.

This same year another conflict emerged and this time with seven Spanish visitors, friends of the missionaries. They went to visit Kavak and had problems with Marino because they did not want to pay the fee. Lino interceded and the visitors asked him for a waiver. He called for a meeting and the people decided that the visitors had to pay. Lino finished his duties as *capitán* in 1988 and asked Marino to give him an account of what was produced in the camp during his two-year period. The amount of money had been doubled, increasing to Bs. 40,500 (US\$ 2,793).

Other entrepreneurial development came from other national corporations such as the current national tour operator called Aerotuy (LTA). LTA got into the tourism business by buying the *Ruta Social* from LAV. According to Lino, the *Ruta Social* of LAV was very much subsidized by the government and in 1986 with the incremental economic crises in the country the government decided to sell the route to LTA under the condition to keep the same service. Yet LTA begins to lose money and decided to increase the prices of the air tickets. This subsequently generated protest by the communities affected and Pemon Indians sequestered an LTA airplane in Santa Elena and another attempt was made in Kamarata. Moreover, due to breach of the agreement and price increase the Government tried to annul the flight permit to LTA. The Executives of LTA traveled to the communities and offered a 40% discount for indigenous people for their support. The Kamarata community was the only that gave them the support they needed and community leaders wrote a letter to the Government stating that they needed LTA because it was the only transportation service in the area.

Aerotuy registered in 1982 as a stock company then developed as a full service company with over 400 employees, with its own lodges, camps, guides, aircraft, and sailing vessels. They specialized in providing air travel to remote destinations in Venezuela that cannot be reached by other means of travel such as Canaima (Angel Falls) and Los Roques and other destinies such as La Blanquilla, Orinoco Delta, Grenada and Tobago. The owners of this company are two Venezuelans graduates of Harvard University and MIT with business links to a major TV station in Caracas. After loosing without explanation the old planes LTA developed their fleet incorporating turboprop aircrafts consisting of three Canadian built 48 passenger de Havilland Dash7's, three US built 12 passenger Cessna Grand Caravans, four 19 passenger Dornier 228, one Cessna Caravan float plane and one Beechcraft 1900. These aircraft are designed to operate on short airfields.

LTA got involved in Kavak because Kaminski invited one their Executives, Juan Carlos Márquez to Kavak so he could see the tourism potential of the area. Between 1988 and 1989 Aerotuy made a contract with 15 people who would be representing the community headed by Antonio José Calcaño. This generated internal conflicts between Marino and LTA. Subsequently they had to redo the contract with the community, which still was not officially registered as an Association. Consequently, Marino was asked to transfer the management of the Kavak camp. He refused arguing that he had been there since the beginning and has rights to stay in the camp. According to Casilda, Marino was allowed to create his own family enterprise. He allegedly offered to the *capitán* of Kamarata at the time, 10% of the gains of his operation. The *capitán* accepted but when Marino had to pay he did not. The *capitán* had already given him a permit as

representative of the community plus Marino had his permit from INPARQUES to operate. He started his operation in partnership with the inbound operators of Hermanos Jimenez and Servivensa. This resulted in others wanting to take advantage and ask for an opportunity to develop their own operations.

The Calcaño family since the mid 80's had been trying to organize a local tourism operation but the partnership broke down. Finally they created the local tour operation called *Makunaima* and decided to setup camp to work in Kavak. They argued that they also had the rights to operate because of the abuse by Marino. This was supported by the majority of the community and by the capitán at the time. Casilda explains that they were sorry years later. At the beginning, Makunaima did not have any clients. However one of the Calcaño brothers Arcadio who was working for Marino at the time left to work in Makunaima and took with him the business arrangements with Servivensa.

The Kavak-Yeuta Association asked INPARQUES to intercede to stop Makunaima from operating. INPARQUES responded that this was a community problem. There were threats of burning Makunaima's churuatas down. Arcadio and others affirmed that if this happened they would burn down Marino's churuatas.

In 1991, the Kavak-Yeuta Camp was legalized under a Civil Association (ACKY), which was the only administrative figure that the law allowed for their type of organization. It was structured with a *Junta Directiva* and a General Assembly of Associates not well defined, following an organization different from the traditional decision making organization of the Pemon. The President of the Junta was also the President of the association and had ample and not clearly define role for managing the business of the association and dispose of its resources. The association although

conceived as a community enterprise, actually was constituted by 153 community members, which included only six women. This new arrangement as we will see later generated a series of conflicts similar to those indigenous communities that experimented with microenterprises in the 70's. According to the statute of the ACKY, the general objective of the Civil Association was to contribute to the development of the valley through the development of the Kavak-Yeuta tourist camp and future mining activities. The economic benefits would be allocated to the construction and endowment of schools, the endowment of medicines for the rural medical facility and the construction of infrastructure for cultural activities. Funds would also be allocated for parks and gardens and for the development of agriculture and cattle ranching and all other activities that the community needed for its enhancement and to assure permanence of the ethnic group in the region.

This same year the Kamaracoto rejected INPARQUES attempt to build a Park Ranger post in Kavak. The Kamacoto argued that the sector of the Gran Sabana where they live has always been well guarded by the community and the construction of the post can alter the natural beauty of the area. Also in a letter sent to the Venezuelan President Carlos Andres Pérez in 1991 the Kamaracoto stressed their rejection of INPARQUES because the institution was applying differentially the environmental law and park law against their subsistence activities and not against the environmental destructive activities of the outsider operators. Engineer Cleto Salandy who was INPARQUES Regional Director at the time declared that INPARQUES respected the position of the Kamaracoto, which by the way had acquired rights (Tepuy, 1991).

In 1993, Servivensa showed an interest in developing *Aicha vena* a waterfall over a flat mountain southwest of the valley close to the route to climb the Auyantepüi. Servivensa was doing maintenance of an old airstrip and organizing several lunches and trips with elite groups. The Kamaracoto noted this because they were also interested in developing a Camp to de-congest Kavak. They wrote a letter to Julian Rodriguez a pilot of Servivensa stating that they did not know about of their plans but if development was their intention and if they were rationale people they should sit together and make an agreement to avoid unnecessary conflicts.

The Carvallo family in Uruyen was developing another local entrepreneur effort since 1989. This family who is one of the original settlers in the valley and have ancestral rights to the land in Uruyen, registered *Excursiones Yurwan* a local tour operation in 1993 attending small VIP groups without the authorization of INPARQUES. Wanting a more organized and continuous operation, the Carvallo family attempted to make a comprehensive and balanced contract with LTA with the guidance of lawyers. Also they were requesting a concession from INPARQUES. It seems that neither the contract nor the concession followed through at the time. To operate their camp the Carvallo family borrowed Bs. 200,000 from the ACKY. In 1994, they did not have the capacity to pay the debt nor to operate their camp. The President of *Excursiones Yurwan* signed an agreement with the ACKY declaring that they would not insist in their petition for a tour operation concession and granted the ACKY exclusivity so the association could continue the procedures on their behalf. The ACKY accepted the debt as canceled agreeing to manage the camp in partnership with the Carvallo family and split the benefits from the concession related services. The ACKY would equipped the Uruyen

camp and make the service contract with the inbound tour operators similar to the conditions for the Kavak camp. By the end of 1994, LTA made a new agreement for exclusive tourism operation with the ACKY and the Carvallo family in Uruyen helping them finance the re-development of the camp. Other members of *Excursiones Yurwan* rejected the agreement. They wrote a letter to LTA in January 1995 in the name of the Carvallo family stating that they did not participate in the agreement. Although they agreed not to obstruct the initiation of day tour operations so to not affect the permits obtain from INPARQUES, they wanted to make clear that they reserved all the rights that corresponded to them. By 1996, LTA and Excursiones Yurwan were working together and somehow the ACKY lost its contract agreement or at least the agreement was not being honored.

Other conflicts emerged for the ACKY later on. Perception in the community was increasing that the ACKY was getting richer and was being mismanaged and in 1994 somebody stole Bs. 1,185,000 (\$7,980) from the Association's office in Kavak. This issue was never resolved generating a feeling of mistrust. A consequence of this was the discharge of the President of the ACKY.

By 1996 after tens years of Kavak's reactivation, the community's expectations of the benefits that tourism was suppose to provide were still unfulfilled. An indication of this is the lack of collaboration showed by community members for new expansions of the ACKY infrastructure. For instance the ACKY needed to build new churuatas and needed expertise from some community members who knew where and how to gather the resources needed to build the churuatas in the traditional manner. This community member's -that included elders- asked a very high price for a job that was supposed to be

for the benefit of the community. Another issue was that the ACKY was becoming an organization with economic power and started to compete with the capitán system and fragmenting the community.

In 1996, *Makunaima* was accused by the other operators of dumping prices of the day tours down by 50%. ACKY in another opportunity attempted to raise the prices of the day tours. The other operators do not follow through and LTA threatens ACKY to withdraw and negotiate with *Makunaima*.

By the time fieldwork was over, there were 6 local operators in the Kamarata Valley. In Kavak, there were three in operation and the tour prices were homogenized minimizing the conflicts from competition in attracting tourists. *Excursiones Pemón* contributed 5% of its income to the Kavak-Yeuta association, while *Makunaima* did not contribute. Moreover, Kavak was consolidating an image in Venezuela and abroad as an ecotourism attraction developing as a pole of tourism. LTA contributed very much to this image by developing high quality brochures underlying both the uniqueness of Kavak and the high quality service of Aerotuy. The Internet was starting to help market Kavak worldwide. Today a myriad of outbound and inbound tour operators offer packages to Kavak through the Internet and then channel or concentrate the demand mostly through contracting the operation of LTA. The *Fundación Canaima* also supported the image of Kavak, a foundation of public and private institutions “friends of the park” that was promoting Canaima National Park through a map-brochure that was being sold in the many destinations in the park.¹⁷¹

¹⁷¹ The foundation sells the brochure to businesses in many destinations such as a local indigenous arts and crafts business in Kavak. Then these businesses would sell the brochure to tourists with a small margin of profits.

Mistrust of the ACKY administrators, community members' debts with the association, competition between tourism operators and with the capitán system and unfulfillment of the larger community's expectations of the benefits of tourism resulted in a not so apparent fragmentation of the communities. Since the creation of the first churuatas in 1979, the camp has grown. A photograph of Kavak taken from the air, which was hanging in Marino's store in Kavak, shows 11 houses. In 1996 at the time of this research, there were 33 houses. Moreover, the number of families residing in the camp was increasing. At this pace, it would not be a surprise that the camp evolve into a small town following a similar growth pattern and evolution as the Canaima camp.

5.4.1 The LTA Operation: Inparques and ACKY contracts

Looking at the contracts or arrangement between the different actors in a tourism system can give as some information regarding how they relate and how power relations are expressed through these contracts and consequently who controls the system. In this case only some of the contracts between LTA and INPARQUES and between LTA and the ACKY are available for review.

As stressed earlier, to operate in Canaima National Park, the operator needs a concession or a commercial use license and pay monthly fees to INPARQUES. The concessions are not through an open bidding but through private agreements with little or no evaluation of these operations contribution to the conservation of the park and the benefits to the host communities.

The 18th of November 1994 the ACKY solicited a permit to put into operation the Uruyen Camp with Aerotuy. The 20th of December of 1994 INPARQUES and LTA signed an agreement of cooperation. Aerotuy would cooperate to warrant the protection,

maintenance and conservation of the Uruyen locality and the Kamarata Valley in the western sector of Canaima National Park. The agreement included the construction and endowment of a Park Ranger post and a National Guard command post in Uruyen and the donation of two rustic vehicles for INPARQUES for activities of warden and control in the Kamarata Valley. Other donations consisted in radio communication equipment and a computer for the Program Management Division of INPARQUES to process information of tour operations in the park and for data relative to the conservation and resources of the area. This agreement did not refer to the fact that LTA already had a concession in the park or whether the enterprise was paying a fixed operating fee or royalties.

After this agreement, INPARQUES in the same day authorized the ACKY to start their operation in Uruyen for six months to support Aerotuy's day tour operations. This operation consisted of the use of two churuatas, two bathrooms and trips in a Toyota to the *Yurwan* and *Akareupa* caves. The ACKY had to pay Bs.100,000 (\$673) monthly and comply with several requirements that included information on tours offered, prices, frequencies of excursions, number of tourists, a copy of the registration in CORPOTURISMO and a copy of their insurance of civil responsibility. This provisional permit was to evaluate the ACKY's operation. If the operation rendered satisfactory, then the association could opt for a service concession contract. Likewise, LTA received a provisional permit to operate where it had to pay monthly fees of Bs 250,000 (\$1,684).

The cooperation agreement between LTA and INPARQUES creates at best a conflict of interest. INPARQUES is understaffed and underfunded to carry on conservation programs and activities, and relies on establishing partnership with the private sector to strengthen its institutional capacity. The way that the LTA-INPARQUES

agreement was written, it seems to benefit only the park system. Yet, INPARQUES approved the same day a provisional permit that directly allowed LTA to operate with a local indigenous enterprise, granting LTA exclusivity in a contract signed four days before the LTA-INPARQUES agreement. Moreover, LTA offered the construction of a Park Ranger post that was rejected by the Kamarata community in 1991. Evidently, this agreement overlooked the Kamaracoto's position valuing the park over the local interests. Nonetheless by the time of this research, the donations by LTA were effective but no posts in Uruyen were established.

The earliest contract that was reviewed was the one between the Kamarata community and LTA one-month before the creation of the ACKY in 1991 (see Table 5.9 for a summary of contractual provisions from 1991 to 1996). Here the community agreed to rent the infrastructure of the camp to LTA (8 rooms with private restrooms) for tourists only. The rent included the service of local guides, kitchen and local cooking staff. LTA agreed to provide the necessary resources for the preparation of food and to pay Bs.30,000 monthly (US\$528 at an exchange of 56.8/dollar) for the rent and services. After the first year of the contract, the rent would be adjusted according to the inflation index published by the Central Bank. Additionally LTA would pay Bs. 546 (\$9.6) per tourist per day tour and Bs. 840 (\$14.7) per tourist for overnight stays, and Bs 240 (\$4.2) per day for the barbecue cook. These prices would be adjusted 6 month later according to the inflation index.

Table 5.9 Some Contractual Provisions between LTA and ACKY from 1991 to 1996.

Year	Rent of ACKY Infrastructure	Day Tour Bs.	Overnight Bs.	ACKY Services	Food Supply
1991	30,000 (\$528)	546 (\$10)	840 (\$15)	Exclusive for LTA	Provided by LTA
1993	60,000 (\$661)	655 (\$7)	1,008 (\$11)	Exclusive for LTA	Provided by LTA
1994	-	1,800 (\$12)	3,000 (\$20)	Exclusive for LTA	Provided by LTA
1996	-	3,338 (\$8)	5,612 (\$13.45)	Exclusive for LTA	Provided by LTA

On the other hand, all outside visitors dedicated to the exploitation of tourism activities such as guides, travel agents, promoters, etc., as well as all the Aerotuy personal were exonerated from the fees indicated above. The community had all the responsibility regarding the salary and benefits of the local staff according to the Labor law, the Social Security law and any other law, regulations, decrees or resolution that were applicable. The duration of the contract was two years and was considered deferred for a period of one year unless one of the parties decided to end the contract.

Another contract was signed in which LTA agreed to facilitate free transportation for those in the community with need of medical attention, for members of the *Junta Directiva* of the ACKY, legal community representatives and personal that provides services to the community. In addition, LTA agreed to facilitate the daily transportation of packages that do not exceed 20kg with previous authorization and a 40% discount for community members (maximum of six seats) for trips on regular Gran Sabana flights of LTA. Yet this service contract is only for two years and LTA had the right to end the agreement at anytime unilaterally with no possibility of a claim from the community.

For 1993, the contract was basically the same but without the LTA service contract. The rent increased to Bs.60,000 (\$661) monthly, the day tour to Bs.655, the overnight stay to Bs. 1,008 and the barbecue cook Bs. 200 per day. Moreover, LTA paid per tourist ground transportation costs that the ACKY started to provide for different tours to Santa Marta, Kamarata, San Juan and Abasakapan. A new element in the contract was a credit line from the ACKY to LTA for the amount of Bs. 3,000,000 (\$ 33,039 at an exchange of 90.8/dollar) to be paid under conditions that both parties would agree to after signing of the contract.

In 1994, the contract remained the same with no evident changes. The ACKY agreed to add electrical light to its service, a freezer and a storage room for exclusive use of LTA. No rental fee for the services was defined. Aerotuy would provide the food, drinks, ice and utensils as usual. The day tour increased to Bs.1,800 and the overnight stay to Bs.3,000 plus an increase in all the ground transportation tours. Prices would be fixed for one year and adjusted accordingly but could not exceed 30% unless the ACKY invested one million bolívares in the camp's facilities.

In the new contract, LTA agreed to provide human resource training to enhance the quality of service. Conflicts in the delay of payment from the part of LTA resulted in an agreement that LTA could be penalized (based on the active rate set by the Central Bank) if it delayed its payment for more than 60 days and was cause of ending the agreement if they had an overdue payment of three months.

The 1996 contract tried to respond to the economic crises in the country. The daytour was \$8 all services included. The overnight was \$13.45 and two nights were \$26.90 including all services plus an additional tour. Ground transportation was still

being provided as a service but the contract did not have a fixed rate for transportation services. The payments would be in bolívares calculated according to the exchange rate average established by the Central Bank bi-weekly. The duration of the contract was changed to a one year period instead of two, deferrable year by year through agreement of both parties.

Overall the contracts seem favorable to both parties and are hard to analyze whether they are fair or not. The implication for the community is that the contract represents a large source of tourists. For the ACKY, it is the only source of tourists and a relatively secured source of income – one of the few economic opportunities in the valley. Apart from being subject to the fragility of the tourism business, the exclusivity for one inbound operator makes them highly dependent on their business.

On the other hand, for LTA the contract secures exclusivity, a good way to contend in a highly competitive and volatile business. This allows them to control remote, unique destinations, the market and the prices of the tour packages. The short duration of the contracts reflects the fragility of the business for LTA, which wants to maintain control over changes in demand and local business relations. Besides, LTA provides all the food (by importing it) as part of their policy underlined in the contract. This same phenomenon was observed in the experiences of tourism development in the Caribbean Islands in the early 70's. Foreign owned hotels imported food mainly because local agricultural systems were not prepared to meet the demand. In the case of the valley, certainly the local agricultural production is mainly for subsistence and probably not prepared to meet the demand. Also the food menu set by LTA was based to cater the tourist taste (although marketed as local food) and it was food not being produced locally

such as chicken and tomatoes. Establishing exclusivity of food as a provision in the contract acts as a deterrent against local initiatives for food production and supply reducing the opportunity to spread the economic benefits of tourism.

A breakdown of the cost of a day tour provided by LTA to the ACKY shows that the association receives 3.3% of the business, while tourism agencies that bring tourist to LTA receive a commission of 20% and LTA keeps 70%. It is highly likely that the percentage that the ACKY receives does not outweigh the cost of managing the camp, paying the staff, maintaining the infrastructure and resources, investing in the community and ameliorating environmental impacts. Yet, the issue is not so much what percentage of the tourism business should be left in the host community. A bigger issue was the frequent conflict between LTA and ACKY over delayed payments that created misperceptions in the community about the ACKY wrong doing and mismanagement. Consequently, the ACKY frequently had to delay the payment of their staff. Certainly, there was a need for accounting training for the ACKY administrators but the accounting system was very straightforward at least in regard of keeping records of arrivals and receipts. ACKY in several situations hired lawyers to pressure LTA because of their late payments. In some cases, LTA administrators would arrive in Kavak with a briefcase with large amounts of money. Yet, the payments were not in full, always leaving a debt. Even the ACKY fired lawyers that they felt had arrangements with LTA to a point that they felt they were losing money in paying a salary to lawyers that at the end did not follow through and decided to leave things as they were. One way that the ACKY tried to pressure LTA, was to raise the price of the Day Tour and lodging, but this did not work because LTA threaten to end the contract and negotiate with another local operator. In

another instance the ACKY tried to block the landing of airplanes by putting gasoline barrels in the middle of the airstrip. However another operator did not support this plus the fear of loosing their business with LTA made the ACKY decide to back track.

All this was coupled by the inconsistencies between LTA records and the one kept by ACKY for every month. LTA would engage in audits that ended in adjustments in their favor. One problem was that both records keeping's had different forms of tracking the numbers of tourists in day tours and in overnight stays. Comparing both sets of data there is a systematic difference between the records favoring LTA. That is visits that LTA failed to account for, suggesting that the ACKY is inflating the data. For instance, comparing data from 1995 to 1996 discrepancies range from 4 to 159 day tour visitors and from 40 to 288 overnight stays tourists. This sums up easily to millions of bolívares.

The deficit that the ACKY claim is caused by two sources: the line of credit from ACKY to LTA and LTA's debt which comes from delaying payment over months. This debt and the exclusivity create a dependency relation, which is the only explanation for the ACKY not ending the business with LTA despite the provisions in the contract regarding overdue payments.

This type of business relations between LTA and the ACKY is hard to analyze due to the contradictions in the data and encountered views on the issues. One way to avoid this is to make compatible the accounting system of both enterprises and have INPARQUES or an independent agent to do regular audits in name of fair business and a responsible tourism system. Moreover before INPARQUES gives concessions to inbound tour operators it should check for these types of relations and serve as an advisor to

indigenous groups or local communities. If not, conflict can easily arise with detrimental effects for communities and the park. Tourism development should strive for development and not just business especially within parks.

5.5 Arrivals and Receipts

Official records indicate that between 1991 and 1995 the number of visitors in Kavak increased slightly from 11,427 to 12,314 with a 1.9 % growth rate per year. Uruyen on the other hand received only 1,453 visitors in 1995. Combining the number of tourists from Kavak and Uruyen, they represent 11.4% of the total visitation level in the park. This data does not include visitors coming to the valley by dugout boats (*curiaras*) through the Acanán River in fluvial excursions from Canaima. Also does not include visitors from private planes nor from two of the private local enterprises.

Data recorded by ACKY on arrivals show a different picture than the data presented by the State tourism data (Table 5.10). Data on arrivals was only available from 1994 up to October of 1996. According to this data arrival in Kavak, seem if not to declining at least stagnating since 1994 while the State data shows that is increasing. Receipts in bolívares have declined slightly responding to the decrease in demand. The receipts have not decreased sharper because tours are paid in dollars and the devaluation benefits the ACKY.

Table 5.10 ACKY Arrivals and Receipts 1994-1996

	1994	1995	1996*	%Change 1996/94
ACKY Arrivals	9,939	8,113	6,389	-17.8
State	8,475	12,314	-	
Receipts Bs.	22,883,400	20,001,000	20,511,218	-5.1
Receipts \$	271,214	166,271	51,148	-40.5

*Does not include the months of November and December

It is hard to analyze these trends on the fact that either the ACKY or LTA have no available data before 1994. However, the data of the ACKY and the perception of the Kamaracoto are that the demand is declining in the last two years.

Figure 5.3 and 5.4 shows the seasonality of Kavak's tourism flows and receipts respectively from 1995 to 1996 as recorded by the ACKY. In 1994, the pattern showed three peak seasons a pattern observed also for Venezuela and Canaima. Two short periods are observed, one from December to January and another during the Holy Week in April. The other is a large season starting in June until September. Yet for 1995 the flow flattened and by 1996 the demand depressed. One explanation is that is simply a matter of tourist flows or an annual seasonality. Another explanation is that there are more destinations and packages being offered elsewhere with similar experiences shifting the demand. For instance, in 1995 the camp of Uruyen started to operate in contract with LTA in the Valley and in 1996 LTA started operating its own camp called Arekuna in the outskirts of the park, north of the Canaima Camp.

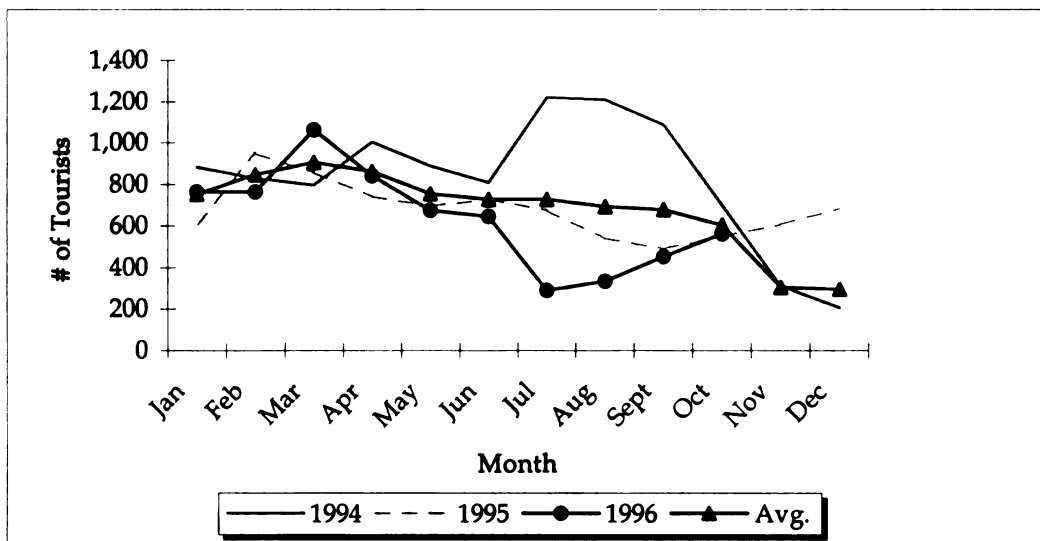


Figure 5.3 Kavak tourist flows from 1994-1996

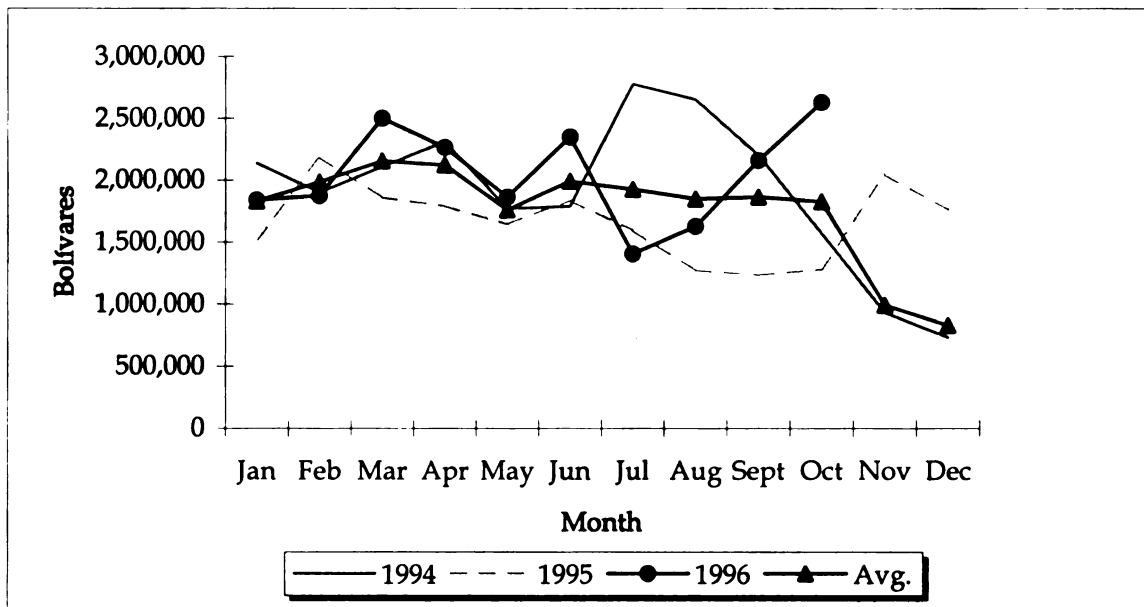


Figure 5.4 ACKY tourists receipts 1994-96

This move by LTA can mean a marketing strategy to diversify their tourist packages and changing their products for different segment of the market. However, the tours related to the three camps offer relatively similar experiences, which can be substitutable. Also in the case of Uruyen and Arekuna the exclusivity of their inbound operation is secured. What this has meant for the ACKY is a decrease in demand while LTA has maintained or increased their demand.

5.6 Park Fees

In September 1995 the National Park Service as part of its new World Bank project established a policy of financial sustainability and started collecting park fees mainly in Canaima National Park. At the time was Bs. 2,000 per visitor (approximately US\$11 at an exchange rate of Bs 176.8/dollar). In 7 months from November 1995 and

May 1996 INPARQUES was collecting approximately between 20,400 and 80,000 dollars a month depending on the visitors' flow and exchange rate. In 1996, the Bolívar got devalued again cutting by more than half the value of the park fee in dollars (US\$4.7 at an exchange rate of Bs. 417.3/dollar). In Kavak this fee was being collected by two Kamaracoto hired by the National Park Service. According to the ACKY records, in one year from November 1995 INPARQUES collected Bs. 20,446,000 (US\$ 62,739 considering changes in exchange rate) in fees in Kavak alone representing between 14 to 20% of the total fees of the park throughout the year. For the Park Service, Kavak represented an important tourist destination that needed to be maintained. In 1996, INPARQUES decided to allocate 25% of the entrance fees to the ACKY in name of the Kamarata community for the maintenance of the Kavak camp. Up to November 1996 this represented approximately an average of US\$3,535 per month for the maintenance of the camp. The positive of this system is that the 25% of the entrance fee were going directly to the ACKY without going through INPARQUES.

Conflicts with the delay of payments by LTA and their perceived lack of power to make the company pay, made the Kamaracoto to consider raising unilaterally the park fees to Bs.7,000 (US\$16.7). This situation could have generated more conflict with the airlines (largest source of tourists) and INPARQUES.

5.7 Tourism Impacts

Tourism impacts were assessed through several methods (Census of the Kamarata Valley, participant observation, key informant interviews, and secondary data analysis). A workshop was also conducted as part of a participatory rural appraisal (PRA) approach to understand Kamaracoto's environmental values. Also to determine the community's

perceived social and environmental changes and consequences due to tourism and other human geographical factors (refer to methodology chapter for details on the workshop). Other data was gathered from census, history of the community, inventory and mapping of the valley resources, local and external institutional relations, past and present conflicts in the access to park resources, measurement shifting cultivation plots and productivity, tourist visitation and expenditures. All this pieces of evidence were expected to interact, cumulatively allow for triangulation in the analysis of the data.

5.7.1 The PRA workshop

Ten were the elements from the valley chosen by participants of the workshop as the most important. They were (without any order of importance): Rainforest, flat-topped mountains (Tepüi), savannas, moriche palms, rivers and water falls, fish, animals, minerals, the community, and the visitors. These elements suggest how intricate the relation of the Pemon Kamaracoto with their natural environment is. It does not seem to be an accident that the elements chosen hold intrinsic subsistence and cultural values for the Kamaracoto possibly because they are the basis for their survival as a community and as indigenous people. Directly below each of these elements is discussed emphasizing their relative importance to workshop participants, underlying changes to the elements, as well as, the causes and consequences attributed to such changes, stressing the impacts due to tourism.

5.7.1.1 The Rainforest

The rainforest (*ichureta*) represents for the Kamaracoto a sacred place. It is the place where most of the shifting cultivation activities take place, which is the agricultural

system most used by the Pemon communities that provides them with their principle source of food. Its importance is reflected in the number of conucos and the land surface each family unit allocates including the time they spend for such practices. The forest supplies the Pemon with logs, wood and palm leaves (*Cucurito* and *San Pablo* leaves) to make their homes (*churuatas*). Logs are also used for building dugout boats (*curiaras*), paddles (*canaletes*) and other wooden and fiber materials needed for arts and crafts and for manufacturing instruments (i.e., squeezer (sebucan - *tangöi*), recipients (*bateas*, *moru*, *watea* and *pangai*')) for the preparation of the *casabe* (*eke* -baked manioc bread cakes) and *kachiri* (fermented beverage, beer like based on bitter manioc). In the forest inhabit animals and birds for hunting and there are many creeks to drink water from and catch small fish. Other resources from the forest include medicines, materials for making clothes and *barbasco* (fish "poison") for fishing.

Concerning changes in the rainforest, the group observed that now there are more shifting cultivation plots and much more people working in conucos. Currently the older Kamaracotos are for the most part the ones that work in the conucos. The production of cultigen is less diverse than before and *casabe* and plantains are produced not only for subsistence but also for commerce. The conucos are now located further away from each household. This is due in part to the conuco cycle, which after 2 or 3 years of cultivation (even more in the valley), the land is left for fallow and new fertile land is sought. The group observed that the closest and largest tracts of fertile lands have already been used and they are now in their fallow period. Some believe that the forest does not regenerate in its totality after the conucos. Yet, the regeneration of these forests is slow and the fallow period has been estimated between 20 to 25 years or more. New types of trees in

the abandoned conucos are now found (probably pioneer species after the gap left by conucos) but there is uncertainty if these new species are different from the original strong and large trees that were cut when preparing the plots.

Trees for making *churuatas* or building *curiaras*, as well as, the *San Pablo* and *Cucurito* palm leaves are scarce because many of them have been harvested and are not found close by anymore. Many of these resources have to be brought from places in the upper river or bought from other remote settlements. Medicine plants are not used as much and forest products are not utilized to fabricate clothes any more. However more crafts are made from forest materials. The trend is then towards less consumption and production of traditional medicines, and consequently the potential loss of the knowledge base to acquire these resources.

The changes in the conucos and the depletion of many forest resources are attributed to population growth, new market opportunities to sell conuco products and requirements of the tourism business. There are now more incentives to produce manioc (*yuca*) in the conucos in a commercial basis. The casabe is sold now for tourism centers (i.e., Canaima), tourism workers and other community members (i.e., schoolteachers) that do not work intensively in their conucos. On the other hand the participants feel that tourism requires (obligates) the use of logwood and palm leaves to build *churuatas* for tourist as well as for the construction of more *curiaras* for transporting tourists. The image of “authenticity” and uniqueness of the valley natural and cultural resources is something that is sold through outsider tour operators promotions and advertising.

The group foresees based on the trends, the cultivation of more or larger conucos but less forest available. This may require extending the cultivation of the conucos and/or

reducing the fallow period of many regenerating secondary forests. The Kamaracoto perceive that the conuco production will be increasingly geared more towards commercial objectives and less towards subsistence purposes only. The conucos will be less diversified requiring buying certain products from others or in the local stores. Also they perceive that there will be an increase in the creation of large community conucos for generating revenues to pay for community needs, goods or services like in the settlements such as Awaraparú, Kovipa and Santa María.

5.7.1.2 Tepüis

The *tepüi* (mesas or flat-topped mountain) mark the geographical location where the Pemon communities are found and delineate their land boundaries. In the tepüis is where rivers are formed and they represent places for recreation and education for many outsiders. They are considered sacred “temples” where the *mawari* or *imawariton* live (evil or good spirits who look like Pemon people but can take the shape of animals). The *piaches* (shamans) find in the tepüis a sanctuary for their inspiration and a place to learn directly from the *mawari*. Each tepüi has its legend found in some of the Pemon myth and stories. Some of the tepüi carry names of important events, places or caciques (political leaders).

In relation to trends, there is an increase in the number of path to access the mountain tops in which foot prints, trampling and trash is easily observed along the trails (despite climbing is not allowed in the tepüis until management plans and monitor mechanisms are in place). Many of the traditional names of the tepüis, rivers and waterfalls have been changed by outsiders (as observed in tourist and official maps) and many sacred places are not respected. Many invasions of sacred spaces and places are

often observed by landing small airplanes and placing antennas for communication over the tepüis, or by extracting endemic plant species (researchers, botanist and tourists). Other observations include cases of accidental fires. The Kamaracotos feel that the community has not made any effort or acted to keep the traditional names and protect sacred places.

These trends are attributed to the creation of the park that have brought more tourists and by the promotion of the area by researchers and important personalities. In addition, it is attributed to the myriad of exploration, research and management activities of government agencies and universities, and to the activities of advertising and film enterprises. Consequently, tepüis can lose their beauty and attractiveness. The proper names of the tepüis will be forgotten and the young Kamaracotos will not respect the tepüis as sacred places.

5.7.1.3 The Savanna

The savanna (*itöi*) is where the Pemon build their houses and *churuatas* near watercourses or streams. They live in the savanna because they respect and fear the forest and because of security reasons given the greater visibility in the savanna. In the savanna it is easier to create pathways to access more rapidly other settlements or places, and its openness allows for using signals for communication. The savanna is habitat for small animals and insects such as larvae of moriche palm, grasshoppers and ants, which are part of the Pemon diet. Also it is easier to fish in small streams in the savanna during the winter season. Whereas the savanna is known to be unproductive is important for small-scale agriculture and cattle grazing. The savanna is also a tourism attraction, something

that is not surprising given the uniqueness of this type of ecosystem that is found only in 2% of the land comprising the west side of the Canaima park.

The valley has a history of agriculture developments and cattle ranching in the savanna related to the Mission activities. Forest was cut to open space for cattle and for cultivating rice that then were converted into grazing areas. The savanna was divided in ranching and grazing areas by fences and wires that still are in place. Currently, there are neither cattle nor rice cultivated at the extent that existed before. This happened after the mission distributed and handed over the control of the activities to community members. Today some conucos produce rice and very few families still keep and commerce with cattle.

Population growth and nucleation in large settlements, changes in conuco areas, patterns of conuco exploitation for commercialization and tourism, uncontrolled fires and transportation needs are the causes attributed to the changes in the savanna. There are certainly more human settlements in the savanna and the tendency now is to set up conucos in savanna forests close to the settlements, instead of cultivating in the mountain forest. Some of these conucos are own by local tourism businesses to sell watermelons, pineapples and sweet and bitter manioc. The problem with the conucos in these forests is that they tend to be substituted by savannas because of the low capacity of the forest to recover and the frequent fires.

It is well documented that the Pemón use fire not only to clear land for their conucos but also for hunting, communicating and rejuvenating graminæ in dry savanna areas to avoid extensive fires due to long dry seasons. Albeit, today in the Valley the savanna is burned many times out of season because of access to fuel and because many

young people do not know how to burn the savanna and then they abuse the fields with the fires. Hence, other species different to the savanna gramineae rejuvenates, changing the savanna environment.

On the other hand, more walking trails and roads for vehicles are open, compacting the land surface making it almost impossible for the savanna to regenerate. The vehicles are used for transporting people to different settlements and tourism camps. They are used to transport tourist to attractions or to the river for transportation in *curiaras*. Further, they are used to transport water in the dry season or to transport goods for the local stores.

Other changes observed include the introduction overtime of fruit trees in communities that are not endemic to the area (mango, coconut, orange, mandarin and guayaba) and the accumulation of large deposits of waste and garbage in the savanna products of the communities and tourism camps activities. No plans are arranged for their treatments.

The wood that is used for fuel is found mainly in the *conucos* and is not any type of wood. For tourism, firewood is purchased from the *conuqueros* or is cut from small trees and shrubs in the savanna. Fairly recently tour operators have adopted kerosene or gas stoves to cook meals for tourists and wood is used only for large grills.

The participants did not see the changes in the savanna as major issues and that these trends will not affect new settlements because its still a very livable place. Conversely, they see the potential of environmental and health problems due to fires, litter and non degradable trash. Also the possibilities of forests with new tree species, more tourism camps in the savanna, but less available sources for firewood.

5.7.1.4 The Moriche Palm

The moriche palm (*kuaiküta*) indicates to the Pemón where true water deposits are in the savanna. Moriche is a source of food (i.e., fruits *-kuai*, and larvae *-ivo*) for animals and people. With the leaves of the moriche, the Kamaracotos build part of their houses, and the palm supplies materials for arts and crafts such as chinchorros (hammocks), typical vestment and adornment. However, these resources are not the main sources traditionally used for arts and crafts.

Originally, morichales were deforested in the valley to build roads and airstrips, but now many of those areas have regenerated. The use of the moriche palm still is not extensive and is harvested in a traditional way, gathering fruits and larvae in a small scale. The surplus of larvae is now sold when it used to be traded. Yet, the Kamaracoto state that there is an increase in the exploitation of moriche leaves because they replace the *San Pablo* and *Cucurito* palm leaves from the forest (these leaves are scarce, hard to obtain or expensive) to make things. Hence, the exploitation of moriche palm is expected to increase for building traditional houses and for possible use in commercial craft making specifically for tourism.

5.7.1.5 The Rivers and Waterfalls

The rivers (*tuna*) and waterfalls (*wena*) are also considered sacred places by the Kamaracotos. Rivers are habitat for fish and are essential for animal, plant and human life. Rivers and streams define geographically places and territorial land as well as, define names of caciques, important events or the name of settlements. Many tourism enterprises have even adopted the name of local waterfalls and rivers. The Kamaracotos know that rivers contain water that evaporates and then precipitates and irrigate their

conucos, and they know very well the behavioral patterns of the rivers levels in rainy and dry seasons. Rivers are a source of fish, a mean for transportation to reach their conucos, to go to hunting places, to commerce and for fluvial tourism. They are natural pools for bathing and hygiene and for recreation such as swimming and *curiara* races. Waterfalls have hydraulic potential for electricity and certainly are tourism attractions. Kamarata have built a small dam with outside assistance near the town that supplies electricity to approximately 516 people. Also the Kamaracoto have built a water supply system in partnership with the mission that brings water from the Auyantepui (“la toma”) and provides water to five settlements (760 people approximately) through a 25 km system of pipes.

Trends related to rivers and waterfalls are attributed again to population growth and behavior, environmental limitations, adoption of new lifestyles and the increase in tourist visitation, activities and services. Today more bridges to cross-streams in the savanna are found indicating more people traveling across the savanna. Conucos are being constructed along the river in communities such as Kuana and Awaraparú. This is probably due to the lack of forest for conucos nearby or because people are taking advantage of beaches in the riverbanks that hold mineral rich and freshly deposited sediments.

Frequently is observed the use of soap, shampoo and detergent in the rivers for bathing or washing dishes. Sometimes even gasoline from the motorboats is discharged in the rivers. There is an increase in the construction of tourism camps around waterfalls and an increase in infrastructure development for tourism near or at riverbanks such as new docks and *churuatas*. The principal tourism camps have constructed septic tanks

close to the rivers. As part of the expansion of the sites to visit, know tour guides take tourist further up the mountain, visiting places such “la toma” (which is the source of water for Kamarata) for sightseeing and bathing. All these issue until now were not perceived as problems but the group know foresee that if these trends continue there will be more contamination of the rivers, less fish and potential diseases in the community. Similarly, the contamination or obstruction of the water supply system of the Kamarata community can be expected.

5.7.1.6 The Fish

The fish (*muró*) are the best components of the river given their variety according to the Pemon. The fish such as the *aimara* and *boquini* represent for the Kamaracoto a major source of protein even more than game animals and this is one of the reasons their settlements are found close to watercourses around areas where fish are abundant. With fish the Kamaracoto prepare *tüma*; a type of soup prepared with water, different types of peppers and *kumachi* (condiment), and then fish, meat or chicken is included. The *tüma* is a common meal among the Kamaracoto and is often prepared for social gatherings to discuss and resolve problems or share work.

The Kamaracoto have observed that each time they go fishing, the fish are less abundant and they are smaller. There are no *aimaras* or *muisunu* and only small sardines and non-consumption fish are found (*terecages*). This could be a sign of depletion of the fish population fish; overconsumption has not allowed for the population to recover; or simply means the migration of the large fish. This is an area for further inquiry.

There are also changes in the traditional techniques to fish. The *barbasco* (fish poison) is not plentiful and available in the forest as it used to be and the ritual practices

related to fishing as well as the sacred stones for different species of fish are gone. Some people use now masks to dive, small bows and arrows and fishing nets (*atarrrayas*). A less impacting (“conservationist”) method for fishing such as *kuna*’ (a plant species mixed with other substances and prepared in the form of small balls that attract fish) are not used anymore because the knowledge is not known among the younger generations.

The causes of some of the changes are attributed to the increase in human population and noise. Also to the increase in navigation in *curiaras* with motorboats through the river (for commerce and tourism), which scare away the big fish to more serene places looking for the depth of large rivers such as El Carrao. Also fish have got accustomed to the fish bait used and need to be changed. A probable cause not mentioned in the decrease in fish population might be the overuse or frequent use of *barbasco*. This something that needs to be explored.

The Kamaracotos expect therefore less fish in the river and less consumption of fish protein. One of the solutions that the community has come up with and agreed upon is not to fish with *barbasco* in the Acanán River (the major river in the valley) until the fish population grows. Now fish has to be brought from outside (mainly by local business stores) and is very expensive for the locals because of the transportation, and many fish that are sold are contaminated with mercury because they come from rivers where gold is exploited.

5.7.1.7 The Animals

Animals (*Oto* or *toron*) are intrinsic to nature and give life to the Pemon people. Indigenous communities tend to settle around areas where animals are abundant. Animals are source of food, medicine, trophies and they are resources for making utensils,

instruments, arts and crafts, and adornment. Conversely, some animals orient spatially the Kamaracotos and indicate the time (i.e., frogs and birds) and the weather season. Many also alert when somebody is coming. Also some animals are kept as pets and dogs often help in hunting parties.

The Kamaracoto know that there is seasonal variations or patterns in the availability of game animals. Yet, game animals and birds in the mountain forest, and many large savanna animals (i.e., deers, tapir, iguanas and ant eaters bears) and insects are not easily found, disappeared or are depleted. The valley have experienced if not game depletion, at least the Kamaracoto have scared away animals and birds including non-consumptive species. Only *zamuros* are the only bird species observed to have increased. Hunting places are know found far away requiring long hunting events (one week or more) that are intensive but inefficient. Other causes that are the increase in noise from elements such as radios, fire arms, machines to grate manioc and airplanes that fly daily in and out of the valley.

Hunting practices have changed also including its rituals, traditions, techniques and strategies. Firearms are commonly used and hunting parties are not organized and are less communal. Increase in fires is related to disorganize hunting events and use of fuels. The cost of ammunitions and other materials for hunting is expensive. Resources such as *cerbatanas* (blow guns), *curare* and other resources have to be purchased to the Ye'kuanas in other areas because such materials are not found locally. Currently there are fewer people that practice hunting and sources of protein from animal meat have to be bought specially in Kamarata.

The Kamaracoto expect based on the trends they observe local depletion of animals. This would require travel long distances to hunt, build camps in remote hunting areas and use more dogs for hunting. If not the tendency will be not to hunt and depend on local stores for meat or migrate to the north of the valley. Other possible outcome is that people begin to domesticate endemic animals or introduce animals such as sheep's, chicken and other livestock for food supply (something that is against the park law).

Again, population growth and nucleation in large settlements, changes in hunting practices and noise seem to be the major sources that account for the trends in animals. Tourism does not seem to play a role in these trends other than the frequent arrivals of airplanes into the valley. All of the foods for tourists are brought from the cities of Ciudad Bolívar, La Asunción (Margarita Island) or Ciudad Guayana.

5.7.1.8 Minerals (*tötepelken*)

Minerals and the soil in the Valley are considered patrimony of the underground soil of the land the Kamaracoto inhabit. Women to manufacture unique pottery used the clay that is found in some parts of the Valley called *caolin*. These pots and pans (*o.ina*) are used for cooking and until fairly recently for trade in different parts of the region. On the other hand, the Kamaracoto know that diamonds and gold can be found in the Valley and that they can bring monetary benefits according to their scale of exploitation.

Some of the changes that the group has observed in regard to minerals is that there is less exploitation and the “bullas” (boom of diamond or gold diggings) are sporadic, although they recognize that the value of the minerals have increased. This trend started since the creation of the park and the park law (mostly when the INPARQUES is able to enforce the law). Also mining brings sporadic benefits, but the

community given its negative impacts has controlled it and miners have shift toward job opportunities in tourism.

Mining remains insignificant in the Kamaracoto culture, as when Simpson did his study in the Valley in 1939, probably because gold and diamond deposits are still scarce. Yet, the Kamaracoto believe that mining diversifies the options for jobs in the Valley, and that the artisan (traditional) type of mining is more beneficial than the more technical intensive one. The Kamaracoto have had two major “bullas” experiences that brought conflict in the community and they are very much aware of problems related to mining. Mining means the abandonment of the conuco (with its consequences for their food supply), significant environmental devastation, outsider migration and the increase of diseases such as paludismo and venereal infections.

Concerning the production of the traditional pots and pans, this practice has significantly slowed. There is little transfer of the knowledge on how to make the pots to the young generation. The small production of pots is for tourists and their price is to high for the people in the community.

5.7.1.9 The Community

For the Kamaracotos, the community (*patamuna*) is the organizational base that identifies them as indigenous people. They conceive the community, as the ground of their social relations, communication and education and it is the vehicle for preserving traditions, customs and other cultural traits. The Kamaracoto people believe that they defend the natural environment and that they contribute to the development of the country by preserving nature for life.

The Kamaracoto observe important changes concerning their social organization with reference to the level of cohesiveness as a community, acculturation and education. About the former, the Kamaracoto observe that whereas before they had one community, now, it is divided not only geographically (one town and several small settlements) but also socioeconomically. The division or fragmentation of the community is attributed to the establishment of new leaders and new economic groups represented by tourism micro enterprises and commercial stores as well as power groups influenced by politicians during election years. Another factors in the fragmentation have been the creation of a civil association by to attend the tourism business of the communities. This parallel organizational structure has gained power because it administrates the revenues from tourism, which are significant higher and increasing compared to any other source of income within the valley. This has been a source of conflict with the traditional structure of decision-making in the Kamarata community. Allegations and cases of corruption, debts, stolen money and misapplication of resources have surrounded the association. There is a generalized perception that the different settlements that helped in the development of the infrastructure for tourism have not received the benefits from tourism as originally intended. This problem seems to be more of a lack of training in business management and uneven and unfair business relation with outside tour operators. With certainty, the Kamaracoto believe that all these divisions create conflict and misunderstanding, and seem to affect the community ability in a daily basis to function and act cooperatively in local and supralocal affairs for the benefits of the community.

The concern for acculturation is observed in changes such as: the way the Pemon dress specifically the young; the devaluing of traditions; adoptions of new recreational

activities while traditional games and typical dances are being lost; use of money for commerce instead of trade; dependency on currency for travel, goods and services; introduction of new languages such as Spanish, English, German (the two latter for tourism related jobs); and changes in religion (a move from polytheism to monotheism).

In regard to education, there was a time when more importance was given to the “western” educational system than the traditional one. The Kamaracoto recognize that education prepares people to be better leaders. Nonetheless, there is less transfer of knowledge from parents to sons and daughters as well as less contact between them. The formal educational system requires children spend more time in the school and less time working and learning from parents in daily subsistence activities. According to the group discussion, the mission and the Venezuelan education system (partly a responsibility of the mission) are linked to changes in religion, emphasis on “western” education and the changes in the transfer of traditional knowledge from generation to generation.

The problems that the community face are much more complex than before and require leaders with more capacity not only to understand and resolve local problems but to also understand and act to deal with supralocal issues that affect the community. The community and the “capitanes” are perceived to be apathetic toward the problems and without will to look to solve them. Likewise, the group feels that there is no alternative source of leadership to turn to for orientation or solutions (from within or outside the community).

With all these changes in community, structure and character the Kamaracoto feel that there will be more division of the community. This, they believe, will cause the Pemon culture to disappear (or at least diffuse or acculturate), and young people will be

forced to migrate, leaving the communities more susceptible to political parties and outsiders manipulations.

5.7.1.10 Visitors (kairan, pachi or karanton)

According to the group discussion, visitors come to the Valley to visit an environment that they don't know. Visitors are important to the Kamaracoto in several respect: they bring hard currency and medicines into the community, some contribute (via anthropological studies) to the better understanding of the Pemon culture, and to certain extent, visitors represent a potential source of cultural exchange.

Among the changes that the Kamaracoto have observed, is the increase of visitors to the valley not only by plane but through the Acanán River (that connects the valley to Angel Falls and to Canaima camp). Furthermore by hiking through an old path from Kavanayén across the mountain range east of the valley. Visitors are known to come mainly for nature tourism, to visit the Kavak and Uruyen savanna, to explore the Auyantepüi's canyons, climb the Auyantepüi, or in the case of cinema enterprises, to film movies (including pornographic videos). This increase in tourist visitation is attributed to foreign enterprises that not only promote ecotourism to the area, but also bring tourists themselves. In fact there is an increase in tourism attractions, routes and circuits that have diversified the tourism product in the valley. Likewise there is growth in the number of local tourism entrepreneurs ("micro-empresas"), which have changed from one to eight in the last five years, establishing contract arrangements with outside tour operators thus, opening the possibilities to receive more tourists. Yet the Kamaracoto maintain that there are very few services for the tourist; they lack effective community organization for tourism and have very little control over who visits, when they visit and where they go.

This increase in visitors is perceived to have brought several consequences. On one side, more work opportunities have opened up (specially for young locals) with the increase of new local “microempresas” for tourism and the development of tourist areas in the valley, and the need for infrastructure constructors, motor boats operators, maintenance services, tour guides, cooking and waitstaff. The possibilities of greater income create in turn opportunities for the community to invest in other priority areas such as health, education and transportation. The Kamaracoto know that trends in visitation would require more services and infrastructure.

On the problem side, the attitude is that the influx of visitors has brought pollution to the area in the form of trash and locally there is limited means to dispose of it properly. Many young Kamaracoto tend to abandoned school and the family *conucos* to look for job opportunities in tourism; and many Kamaracoto believe that racial mixing between locals and visitors is an undesirable outcome in the contact with outsiders and this can threaten the community and its cultural values. Finally, the community has seen and experienced the beginnings of fragmentation within the community as the local tourism “microempresas” compete for the share of tourists (this has been observed most notably in the practice of price-dumping by some of the microempresas).

5.8 Attitude towards tourism: Census data

During the census, data was gathered regarding people’s general attitude towards Canaima, tourism development and their community. Only head of households and spouses were asked to respond to the questionnaire. More than 409 people responded to each of the questions. When asked about describing their community 66.1% described it as an agricultural community. Yet, in the future only 35.2% wanted their community to

be an agricultural area while 40% wanted their community to be a tourist area. Besides 53% of the respondents felt that their community would be a tourist area in the future.

Overall, the attitude of the Kamaracoto towards tourism is positive. The majority (68.9) is happy with the tourism activities in the valley and 73.8 % felt that tourism was good for the community. Almost three-quarters of respondents (74.6%) agreed that they would feel happy if their community planned future tourism projects, while 65.3% expressed that they would like to participate in the planning of tourism in their community. Likewise, 64.5% affirmed that the he or she would benefit more with tourism development in their community and 68% agreed that the community should attract more tourists. Certainly the majority (68%) of the respondents agree that the commerce of arts in their community has benefited from tourism and less than half (44.7%) disagreed that tourism does not create jobs opportunities.

In contrast, little more than half (53.8%) believed that by incrementing the number of tourists to the community would enhance the local economy. Furthermore, only 43% believed that the majority of the people in the community benefit from tourism.

In terms of control over development, 79.5% expressed that the community should control the development of tourism. This was corroborated somewhat by the fact that 58.7% did not agree that outsiders should be allowed to develop tourism attractions in the valley.

Regarding changes, less than half (48.2%) of respondents agreed that tourism has not changed the customs and life style of the community. In terms of environmental impacts 38.6% believed that tourism deteriorates the environment against 31.5% that disagree. Equally, 38.1% disagree that tourism development has provoked a change in

land use from agriculture to tourism, against 34% that agreed. When asked whether the community should restrict tourism development, 31.1% of respondents agreed while 38.6% disagreed. Similarly, 36.4% would prefer less tourism in their community compared to 35% that would not.

This overall positive attitude towards tourism contrasts with the issues linked to tourism underlined in the workshop. Indeed the positive attitude does not reflect the less tangible environmental problems linked to tourism.

5.9 Impacts on the Kamaracoto Social Organization

Impacts in the Kamaracoto social organization is understood here as changes in individual roles in relation to one another and within a social structure. The impacts observed are the effects of tourism in the household as the domestic unit of production and at the level of the Kamaracoto political system.

At the household level the major impact of is the displacement of household members –particularly men- from agriculture production to tourism. This creates in some household labor scarcity, tension in the father-in-law and son-in-law relations and changes in forms of reciprocity within and between households. Later it will be discussed that such labor displacements results in a direct impact on the quality of the shifting cultivation practices with potential detrimental effects to the forest and savanna. This is the mechanism that explains environmental change at the local level related to cultural ecological changes due to tourism.

At the political level, the creation of a community tourism association, the proliferation of local tourism enterprises impinged upon the *Capitán* system. The creation of the ACKY has played a role in community fragmentation. According to my

informants, the community needed to register their new organization and the official register gave them a civil association statue given that was the only administrative figure that the law allowed based on their objectives. This organization was expected to create a structure more comprehensive than the traditional to engage in business relations with outsiders at the community level. The ACKY in paper function differently from the traditional social organization of the Kamarakoto with a *Junta Directiva* composed of a President, Administrator and Secretary. Indeed the Kamaracoto adopted an organizational model without considering their traditional structures. The major problem is that an economic unit at the community level did not exist and the basic domestic units of production and consumption of the Kamaracoto were not incorporated in the structure. The ACKY operated in contradiction to these basic units, with a new type of production, new division of labor and without distributing the benefits in the traditional way. A reflection of this is the proliferation of family owned tourism businesses, which are adaptations of traditional units of production that maintained principles of reciprocity.

Conversely, the ACKY started to become an organization with economic power and operated in competition with the *Capitán* system. Although the ACKY adhere to the Kamarata General Assembly and to the elder council, the ACKY function parallel to these structures making more independent decisions as the association gained economic power. Overall those involved in tourism perceived the *capitán general* and the other community capitanes as not having the skills to deal with tourism issues. When the conflicts between the local operators emerged the *capitán general* and the council of elders in Kamarata could not mediate the conflicts. On the other hand the *Capitán* system and the ACKY were overlooked and undermine when inbound tour operators negotiated

directly with local entrepreneurs without their consultation (e.g., *Excursiones Pemon* and *Makunaima*).

The alleged cases of corruption, debts and misallocation of resources that have surrounded the association seem to be more a result of a lack of training in business management, couple with competition among local microempresas and uneven and unfair business practices with outside tour operators than actual corruption. Those allegations also come from the perception that the association receives large amounts of revenues and that the community has not received its share of such benefits as expected when community members were asked to participate with their labor, knowledge, food and materials in the development of the Kavak camp. This generated a general feeling of discontent among many community members mostly from those not involved in tourism. Yet they did not voice directly their opinion and confront the association, only through creating rumors in the traditional ways. Although the ACKY is having a hard time funding community support given that regular barter relations at least as related to the ACKY is changed for money exchange.

Another issue is that many community members would borrow money from the ACKY and would or could not pay back. Community meetings that were important gatherings for discussing community issues and for celebrations started to focus only around tourism issues. The debt of community members was so widespread that many did not attend the meetings because they felt that were going to be asked to pay their debts. This of course contributed to widen the fragmentation of the community.

5.10 Impacts to the environment: Shifting Cultivation

The data presented in chapter four regarding shifting cultivation plots shows only that the Kamaracoto remain very much traditional in terms of their agriculture practices and have a considerable percentage of families (66%) that rely directly on such practices for their food supply. The conucos remain as diverse (polycrops) as other measured by Kingsbury (1999) in Kavanayen (which is a Pemon-Arekuna community also with a mission history since 1942) but there are some monocrop conucos especially for *cachiri* and *casabe*. The latter mainly for sale. However, the data does not show quantitatively a pattern of less tangible changes in the traditional shifting cultivation practices of the Kamaracoto that have been expressed by some of my informants. Further studies need to focus on this more thoroughly. However, there are important factors to analyze.

The average size of the conuco (7,213m²) is quite large compared to data collected elsewhere (Table 5.11). This difference is mostly due to the small sample error of conucos (18) with wide variability. Besides this obvious point, the average size of the conuco is large but very close to the one estimated by Kingsbury (1999) for Kavanayen, which has a similar history and population than Kamarata. What this data indicates is that conucos size is moderately correlated with high population concentration that depends on agriculture.

Table 5.11 Cultivated Areas estimates for different Pemon communities

Community	Year	Pop. Size	# of plots sampled	# of Families Cultivating	Cultivated Area ha	Estimate Forest Cleared ha./yr	Average Conuco Size m ²	Area Cultivated per inhabitant
Monte Bello ¹	1986	110	52	23	17.3	5.4*	2,353	1,580
Parai Tepuy de Roraima ¹	1986	162	79	33	25.3	8.0*	2,444	1,563
San Ignacio de Yuruani ¹	1986	130	13	26	4.6	7.2*	2,800	356
San Francisco de Yuruani ¹	1986	392	72	62	22.6	20.8*	3,364	576
Kavanayén ²	1985	475	-	53	53.0	26.5	5,000	1116*
Monte Bello ³	1995	200	42	22	13.5	6.7	3,073.7	676*
Kavanayén ³	1995	850-1,000	84	103	132.6*	66.3	6,440.7	1,326*
Kamarata	1996	1,278	18	151	217.8	108.9	7,213.0	1,704

Note: 1 Azuaje (1991); 2 Elcoro & Vera (1986); 3 Kingsbury (1999); *estimated by the author

When we look at the area cultivated per inhabitant a different pattern emerges. Azuaje (1991) provides a set of comparative data regarding shifting cultivation. He compared shifting cultivation across Pemon settlements with different levels of intervention and acculturation. He found that there is a negative correlation between cultivated area /inhabitant and average conuco size.

For instance Azuaje (1991) obtained cultivated area per inhabitant of 1,563m² and 1,580m² in Paraitepui de Roraima and Monte Bello respectively (Table 5.12) which were considered at the time communities less developed or intervened. Paraitepui de Roraima had access through a dirt road, had a spontaneous concentration of population with traditional housing, a basic school and a medical service. Monte Bello on the other hand had no road access and presented a traditional settlement pattern. The data contrasted

with the area cultivated per inhabitant in communities much more developed or intervened such as San Francisco de Yuruaní (576 m²) and San Ignacio (356 m²). Both of these communities showed concentrated populations with rural houses and government development programs along the *El Dorado* and *Santa Elena de Uairén* road. Azuaje's suggests that the difference in area cultivated per inhabitant between communities be due to the degree each community is developed and influenced by outside forces. The interaction that Azuaje observes is that in communities such as San Francisco de Yuruaní that have more people in activities such as commerce, transportation and teaching and fewer people working in agriculture, the number of conucos is smaller in relation to the number of inhabitant and families but the average size of the conuco was the largest of the study area (3,354m²). He interpreted this as a readjustment of the community to satisfy the needs of its population, which is dedicated to non-agriculture activities, and to the needs derived from changes in lifestyle. Many of the few families that practice shifting cultivation in the more acculturated settlements showed large monocrop conucos for commercialization. Moreover, Azuaje observes that there is the tendency of family groups to open new cultivation plots contiguous from the one already in production creating "macroconucos" of 3 to 6 ha or more, even on the slope of a mountain or near creeks (Azuaje, 1991). This not only affect the watershed and facilitate erosion but also affect the capacity of the forest to regenerate given the relationship between the size of an area deforested and its capacity to regenerate its forest cover (Uhl, 1980). Azuaje's data suggests that in Pemón settlements, acculturation and development processes in the form of market integration through wage labor reduces deforestation but promotes agriculture intensification and forest degradation.

In light of this data, it is interesting to note that Kamarata and Kavanayen have relative similar cultivated area/inhabitant compared to the Monte Bello and Parai Tepuy data presented by Azuaje. This shows that both Kamarata and Kavanayen have agriculture subsistence practices as extensive as less “developed or acculturated” settlements and it is their population size (concentrated by the missions) that their cultivated area /inhabitant differ from the statistics for Monte Bello and Parai Tepuy. In contrast both Kamarata and Kavanayen do not show comparable average conuco sizes to the ones for Monte Bello and Parai Tepuy. In fact their conucos sizes resemble patterns of more “developed or intervene” settlements such for San Ignacio de Yuruaní and San Francisco de Yuruaní studied by Azuaje. Still there is a population size effect but does the mission population concentration effect explain the agriculture intensification pattern alone? What about the difference in average conuco size between Kavanayén and Kamarata?

In the case of Kamarata the most clear explanation for the large conuco can be linked to population growth and the nucleation and sedentism effect of the mission as observed elsewhere in Venezuela (Behrens, Baksh and Mothes, 1994). Traditionally Pemon families tended to live close to their conucos, moving to new conuco areas each 3 or 4 years after the production is reduced letting the forest to fallow. Today because of their fixed residency in concentrated population centers with services there is a tendency to overexploit the old conuco by extending the period of cultivation, reduce the fallow period of old conucos or simply extend the size of the plot. This creates large conucos that do not have a forest buffer between them, joining adjacent conucos with detrimental effects for the forest capacity to recover.

On the other hand the large conucos could be linked to the number families cultivating agriculture product¹⁷² to supply families in the valley (44% of the population) and in *Las Malocas* (Canaima) that do not practice agriculture and/or producing to supply food for tourism camps and operators in the valley and for the Canaima tourism resort. This food production explanation could be the difference between Kamarata and Kavanayen conuco sizes. In Kavanayen there are few seasonal paying jobs for men outside the community the market for conuco surplus is insufficient and transportation is inadequate (Kingsbury, 1999).

The decisions by the Kamaracoto to clear new conucos, extend the cultivation period or shorten the fallow periods have several explanations according to my informants. Conucos are labor intensive and require the domestic unit of production work together and this is coming apart. Indeed household labor is needed not only for production but also for the maintenance of the agriculture system. An informant explains that the school system does not facilitate youngsters to go and work in the conucos with their parents. Later they return to work with their parents because they can't go out of the valley to continue their studies and because there are few job opportunities. Their help is not as good as the youngster of yesteryears who knew how to work the conuco and make all the type of crafts necessary for all types of work. Likewise the young Kamaracoto that are starting a new family and opening their own agricultural plots, tend to be less experienced and dependent on the population center. Therefore they tend to exploit marginal lands in the slopes of the montane forest or exploit savanna forests close to their house that are more fragile and prone to the problem of savannization.

¹⁷² Of those that practice shifting cultivation in the valley 15% sell surpluses of their agriculture production.

Tourism contributes to this issue because the relative high paying jobs tend to displace the young work force both males and females from subsistence farming to tourism. Of all households in the Kamarata Valley, 39% (77) have tourism income benefiting 544 people that represent approximately 43% of the total population. Of those that receive tourism income 56% cultivate for subsistence only, 8% produce for subsistence and cash crops and 37% do not produce crops; and of those that receive tourism income 52% (57) are head of household and 29% (32) are sons. This displacement cuts through the domestic unit of production affecting the labor force. It does not affect so much the matriuxorical residence but the post marital service of the son-in-law to its father-in-law that is key in the social and economic reproduction of the Pemon society. The head of families relies on their sons and sons-in-law to work with rest of the domestic unit in the shifting cultivation works.

When tourism or other cash economy activity make a way into the Pemon society it does not only generates the development of a new economy based on exchange values and circulation of commodities as Urbina (1983) observed among the Arekuna. In addition has a direct effect on the quality of agriculture practices with detrimental effects. An indication of this issue is that now many elder Kamaracoto head of households do not have the help they used to from their sons and don't want to travel so far to work in their conucos. So they tend to stick to their old conucos and extend the surface of the plot. This certainly has resulted in what Urbina (1983) refers to an internal reorganization of the domestic unit as a way to adapt to the new conditions. This has meant for many families a greater cost in efforts in time and energy in food production. For those families that can afford it may require money to pay helpers for specific jobs.

In the case of men head of households being displaced to work in tourism, the burden of agriculture production fall mainly on the spouse and women of the household. In general wage laborers tend to have fewer conucos than non-wage laborers as Kingsbury (1999) shows. Additionally, tourism laborers that maintain conucos tend to mobilize between their residence and the tourism camps and for convenience they tend to take advantage of the marginal lands in the slopes nearby montane or savanna forest relative to their residence which again are more fragile and prone to the problem of savannization. A phenomena also observed among wage laborers in Kavanayen (1999).

CHAPTER 6

MODELLING THE POLITICAL ECOLOGY OF NATURE-BASED TOURISM IN THE KAMARATA VALLEY

Throughout this thesis there has been an attempt to explore the environmental as well as the historical and current political, institutional, economic and social structures and processes that are influencing and changing the Pemon culture and environmental resource relations. The purpose has been to explain how and why the Pemon are degrading their land. The thesis has underscored what role ecotourism has played in environmental change within a developmental context in Canaima National Park and the case study of the Pemon- Kamaracoto in the Kamarata Valley. The premise is that without considering the political ecology context in which the Pemon are immersed, there is great risk in misunderstanding environmental change in Canaima that limits the capacity to halt any environmental detrimental problem.

In Canaima National Park, forest depletion and savannization is the environmental issue of most concern for both the Canaima's resource managers and the Pemon people. Today there is a good understanding of the ecological process of environmental change in the Gran Sabana but only a scattered or limited understanding of its social causes.

The history of the Pemon social cultural and economic integration into the Venezuelan way of life expressed through government indigenist policies and conservation and development schemes show that environmental changes in Canaima are a result of the interplay of power relations between the Pemon and the dominant Venezuelan society mainly through mission activities, road construction, agriculture

extension, rural housing and services programs, mining and tourism. This has resulted in a slow but progressive acculturation process affecting the Pemon demographic and settlement pattern, their household socio-economic organization and cultural-ecological practices that combined with the constraints of Canaima's environment leads to forest degradation.

The objective of this chapter is to try to synthesize in a model the causes of environmental change (i.e., forest depletion and savannization) in the Kamarata Valley that are linked specifically to tourism based on the data gathered in this dissertation complemented with data collected elsewhere. It is clear that not all-environmental degradation in the valley is due to tourism. However, here it will be shown that as a market driven activity, tourism plays a role both as an agent and catalyzer of change. The model attempts to isolate the effect of tourism and its contribution to environmental change. The model links together the different scales of analysis and illustrates the mechanisms by which the political economic of tourism in the Kamarata Valley impinges upon the changing cultural-ecological relations of the Pemon. These factors are dynamic and are considered within a historical context, social and institutional relations, and within the structure of the tourism system in the valley.

6.1 The Political Ecology of Nature Based Tourism: the Model

Figures 6.1 and 6.2 illustrate the political ecology of environmental change in the Kamarata Valley as it relates to tourism. Environmental change in the Kamarata Valley as observed by the Kamaracoto is very diverse with multiple causes. Yet the model focuses on one main issue: the social causes of forest depletion and the continuous substitution of forest by savanna. Figure 6.1 is a static model showing local and global

tourism linkages and their impacts on the Kamaracoto household labor which has implications for the stability of the shifting cultivation and the ecological stability of the forest resource base. Figure 6.2 is a more dynamic model complementing the first one by illustrating the destabilization of the conucos system over time as market integration through labor and cash crops increases.

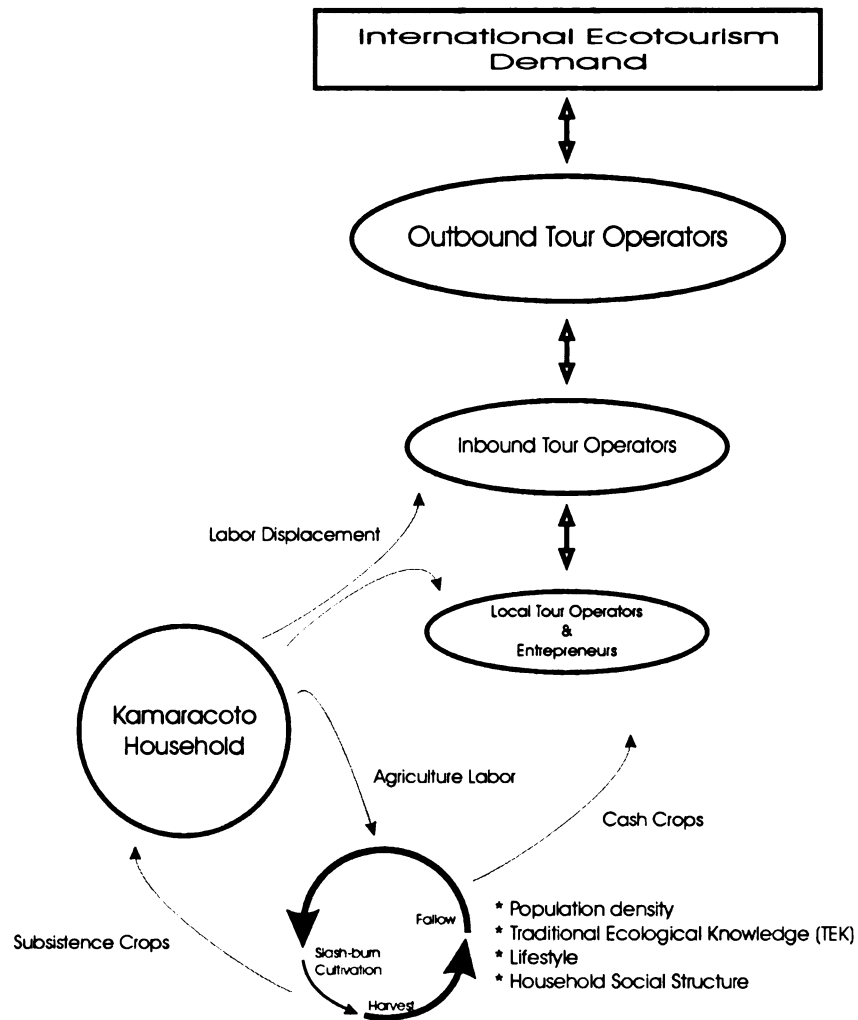


Figure 6.1 The political ecology model of tourism in the Kamarata Valley

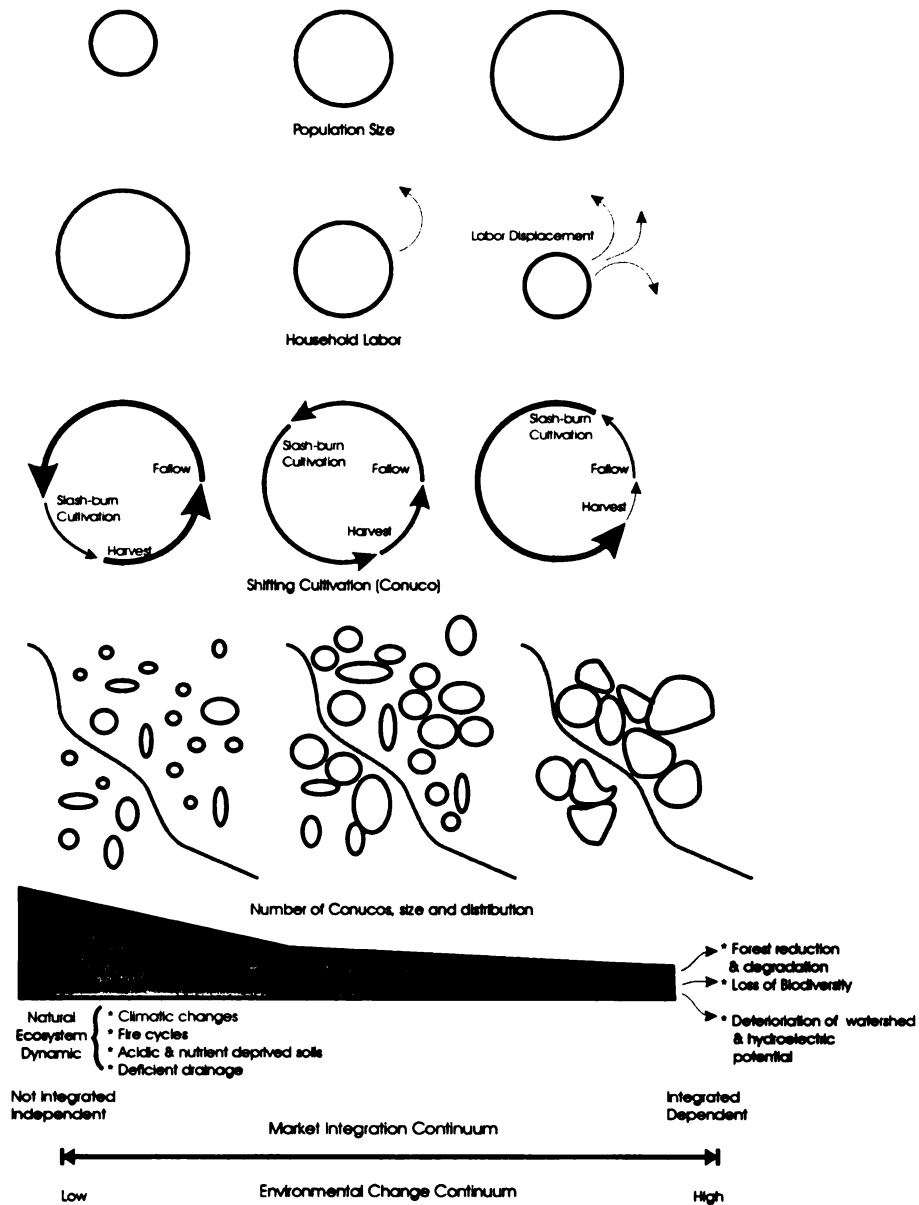


Figure 6.2 Market integration and the destabilization of shifting cultivation and environmental change

Here, it is important to emphasize that the explanatory potential of this model is within a particular context of development explained through the dissertation, specifically the historical context and the institutions, policies and power relations that influence both resource use and the indigenous people. Yet, these structures and processes could be observed in all areas where subsistence shifting cultivation is practiced in tropical

environments and where the market is playing a role in the local economy (i.e., NTFP's, mining, tourism).

The environmental changes described in the model are occurring between the involvement and development stage of the evolution of the Kamarata Valley as a tourist area as described by Butler's model (1980). That is, there is regularity and seasonality in tourist visitation and there is a social pattern that organizes local residents and involves them in catering to tourists by providing services and facilities and by selling arts and crafts. The link of local entrepreneurs with inbound and outbound operators already provides an organization in tourist travel arrangements which reflects the more development stage of the tourism enterprise. In fact, Kavak is a well-defined tourist market area with developed natural and cultural attractions due to advertising and marketing efforts carried out by one of the major inbound tour operators and the many websites of different small and large travel agencies and tour operators within and outside of the country. The phase of development is still early given that the Kamaracoto still are involved and have relative control of the process. Yet as the marketing, packaging and transportation has improved, more local operations have been created with a pressure to develop more tourism infrastructure, plus the type of tourist being attracted is changing varying from the allocentric to the midcentric type (Plog's classification) or institutionalized tourist (Cohen's classification).

In short, the political ecological model (Figures 6.1 and 6.2) show that forest depletion and savannization have natural and human induced causes. In the Kamarata Valley, this environmental change is due to the Kamaracoto changing resource relations which are the proximal causes. In other words environmental changes are due to changes

in their cultural ecological practices (i.e., shifting cultivation system and use of fire).

Resource relations are dependent on the stability of social/cultural factors (i.e., population density, traditional ecological knowledge, lifestyle and domestic unit social structure) that have been changing due to the Kamaracoto's historical context that includes tourism development.

Tourism is contributing to the instability of these social/cultural factors as the Kamaracoto integrate more into the market through cash crops or labor. Both forms of integration contribute to the breakdown of the conuco system not allowing for the ecological stability of the forest. Tourism is a National Park objective and is now an important source of revenue. Production of cash crops affects directly the conuco system while labor changes the social structure of the domestic unit on which the conuco system depends. The local ecotourism industry is linked to national and international operations and marketing and supported by the Venezuelan government development agenda.

Butler's (1980) model implies that as times goes by and the number of tourist increases local market integration necessarily occurs as the destination reaches an involvement and more advanced development stage. Based on the context of the Kamaracoto, the political ecological model predicts that as the Kamaracoto become more integrated into the market (i.e., labor and cash crops) through tourism development in the park, forest depletion and savannization will increase (Figure 6.2).

Figure 6.2 shows the changes in household labor and the stability of the conuco system as market integration increases. It also shows the change in the number of conucos, size and spatial distribution as market intergration increases. At lower levels of market integration the houseld labor is divided and organized traditionally. The shifting

cultivation is one with a short cultivation period (two to three years) and a long fallow period (12, 25, 50 years or more). Deforestation follows a diffuse pattern which is commonly associated with traditional smallholder subsistence agriculture (Mertens and Lambin, 1997). The number of conucos and the area cultivated per inhabitant is relatively large reflecting the number of households involved in subsistence farming, while the conucos size are relatively small (one to two hectares) which facilitate the regeneration of the forest once the conuco is left for fallow.

As market integration increases, labor is displaced in the household creating labor scarcity. This displacement requires readjustments in the household which have an impact on the stability of the shifting cultivation system. This readjustment implies a reduction in the time and effort allocated for producing and maintaining the conuco. This might be reflected in an extension of the cultivation period (intensification) or a reduction of the fallow period of old conucos with secondary forest to avoid the cost of clearing new areas in primary forest. In both cases there is a diminished return in terms of the production of the conuco in addition to soil degradation affecting the ecological resiliency of the forest. The number of conucos may remain the same but their size is larger (e.g., four to seven hectares) given that more forest adjacent to the conuco is cut to increase production, eliminating the forest buffer between conucos resulting in macro-conucos therefore degrading the forest. The pattern of deforestation will still be diffused but will result in a patch pattern commonly associated with more permanent cultivation for subsistence food and/or cash crops (Merten and Lambin, 1997). If the trend of market integration continues then more labor will be displaced thus minimizing the household labor. Shifting cultivation in a particular area will be more permanent where the fallow is

significantly reduced and production is very low. This will occur until fewer households depend upon subsistence agriculture such as in mining areas (e.g., Las Claritas) or when nearby forest resources are depleted. In this scenario, few agriculturalist households are left to manage large concentrated conucos areas that are needed to supply those in the population engaged in wage labor (e.g., San Francisco de Yuruani). At this phase, household food security will be compromised and the Kamaracoto will be forced to migrate to continue subsistence practices or remain in the valley and become totally dependent on the limited market labor opportunities. Given the fewer agriculturalist left, deforestation will be reduced despite of forest availability for conucos and will show large contiguous patches reflecting permanent cultivation areas if agriculture is intensified.

The lower portion of figure 6.2 illustrates the reduction of forest resources. The initial sharp curve shows the compounded effect of the natural ecosystem dynamic and the effect of human impacts as a result of the instability of the shifting cultivation system. Once shifting cultivation practices are reduced due to market integration then the availability of forest resources will be subject to its own natural dynamics. The following is a more detailed explanation of the model complemented with data collected elsewhere.

6.1.1 The Environmental Issue

Forest depletion and “savannization” in Canaima National Park have three major environmental, economic and social consequences. These include: 1) the deterioration of the hydroelectric potential of the Caroní basin; 2) the loss of biodiversity, and; 3) the reduction in forest availability for a viable indigenous subsistence economy. Each of the major consequences have multiple ramifications in themselves from the local to the

national level with detrimental positive feedback loops affecting the preservation of the park and the quality of life of the Pemon people. For the Pemon it means the loss of subsistence farming opportunities, which assures food security and economic autonomy, but if subsistence farming fails then there is further deforestation, impoverishment and migration.

Forest depletion and “savannization” are linked both to natural and anthropogenic causes. Natural causes refer to the dynamics of the Gran Sabana ecosystem in Canaima. The savanna ecosystem islands in southern Venezuela are believed to be remains of a more extensive savanna formation during former dryer climatic era, which became isolated with the advancement of the forest due to more humid climates (Eden, 1974). These savanna formations are kept in place by fire cycles, which do not facilitate the regeneration of the forest (Eden, 1974) but maintain and determine the predominance and composition of the herbaceous layer and tree fire-resistant species (Medina and Silva, 1990). In the Gran Sabana the savanna type vegetation has been predominant since the Holocene age, thousands of years before the presence and impacts of humans (Rinaldi and Schubert, 1991; Fölster and Dezzeo, 1994). Its natural degradation process up to the shrub savanna state seems to be unique to the Gran Sabana ecosystem due to successional trends (extended climatic changes and fire), acidic and nutrient deprived soils, deficient drainage and the low capacity of the forest to recover (Eden, 1970; Colchester, 1981; Fölster and Dezzeo, 1994; Hernandez, 1987; Rull, 1992; Sarmiento and Monasterio, 1975).

Conversely, human related causes of forest degradation and savannization include the frequent practice of clearing forest for swidden agriculture and burning in both forest

and savanna areas by indigenous people. Similarly, this is a result of agriculture intensification, cattle ranching, mining, lumber extraction, and tourism activities by criollos (Fölster, 1986; Hernandez, 1987; Huber, 1995). The Pemon clear forest for their agriculture system and use fire not only to clear forest areas for their conucos but also for hunting, communicating and rejuvenating gramineae in dry savanna areas to avoid extensive fires due to long dry seasons (Rodriguez, 1981). It is the destabilization of these cultural ecological practices of the Pemon that the model is focused upon.

6.1.2 Changing resource relations: the destabilization of cultural ecological practices among the Pemon.

For the Kamarata Valley, the model identifies the Kamaracoto's changing resource relations as the proximate social cause of forest depletion. This refers specifically to the destabilization of their cultural ecological practices. This is a crucial factor because forest depletion together with frequent fires, ultimately leads to savannization especially in the forest/savanna ecotone.

Two main factors underlie the changing-resource relations among the Kamaracoto: a) the breakdown of the conuco system, and b) the breakdown of the use of fire as a cultural and environmental management resource.

A stable conuco system is one that allows for *ecological stability* that facilitates the forest to return to the original state, or at least a similar one, after being disturbed (Fölster, 1995). Shifting cultivation agriculture and its productivity depends on many factors such as:

- Quality of soils (i.e., diabase base)
- Relatively flat land or with gentle slope
- Size of the forest disturbance

- Primary forest vs. secondary forest
- Timing for and proper slash-burn technique
- Forest areas around the cultivation plot for seed sources essential for forest restoration
- Short period of cultivation (2-3 years)
- Polyvariety of crops and intercropping depending on the swidden microclimates which different crops depend
- Weeding, harvesting and replanting
- Long fallow periods to allow for the regeneration of secondary forest

Likewise the effectiveness of the conuco system (shifting cultivation) is highly dependent on *social/cultural stability* factors that are the social and cultural conditions that maintain the *ecological stability* of the agriculture system. Therefore the breakdown of the conuco system results from changes in these factors:

1. Small population size and density relative to forest availability and quality of soil for agriculture;
2. Transfer of traditional ecological knowledge in regard to cultural ecological practices (i.e., knowledge of shifting cultivation and fire use);
3. Permanence of traditional lifestyle and subsistence natural resource exploitation; and
4. Maintenance of the socio-economic structure of the domestic unit.

In general these social/cultural stability factors play a significant role on Kamaracoto resource relations (i.e., agriculture system). Changes in these factors implies that the Kamaracoto adopt strategies or make certain decisions to cope with environmental constraints and changing social and cultural conditions that may result in detrimental environmental consequences. Examples of these decisions have to do with agriculture site selection, changing the size of a conuco, having contiguous conucos, extending the cultivation period, shortening of the fallow period, exploiting the savanna forest

fragments, creating conucos in forest/savanna ecotones, production of cash crops, migration, etc.

An acculturation process that has its roots in the historical context of the Pemon society is the main cause of the instability of the social/cultural stability factors. This history is characterized by the encroachment of the dominant Venezuelan society through mission activities, the creation of the national park on Pemon territory, and the implementation of government development programs which, together with private sector initiatives, support a move towards market oriented economic activities. Evidence for this acculturation process comes from several pieces of evidence. First, the data gathered by (Cousins, 1991; Urbina, 1982) regarding the impact of market economic activities on the social structure of the Pemon in Kavanayen and Las Claritas respectively, illustrates the acculturation process. Second, the data gathered by Azuaje (1991) shows the different impacts of acculturation on the conuco of three Pemon communities. Third, Kingsbury (1999) using detailed social and environmental data, testing key hypotheses illustrates the influences of human settlement, population growth and the shifting cultivation practices of the Pemon on forest resources in two settlements (Kavanayen and Monte Bello). Fourth, the Kamaracoto's own perceptions of environmental change and its causes reflect these acculturation processes in their own settlements.

The Kamaracoto, after hundreds of years of occupying the Kamarata Valley, still have strong subsistence relationship with their environment and this is reflected in the percentage of the population dependent on a subsistence economy. This is indicative of the adaptation of the Pemon to the environmental constraints (low productivity of the forest and savanna and scarce resources) and the success of their agriculture system.

Nonetheless, the trends observed here show the beginning of changes in the Kamaracoto's resource relations, which the Kamaracoto themselves believe can have serious implications for their cultural survival.

6.1.3 Changes in social/cultural stability factors

1. - Small population size and density relative to forest availability and quality of soil

The ratio of population size and availability of forests and quality of soils is very important for the effectiveness of the conuco system. Traditionally the Pemon settlements tended to split apart and migrate once certain level of social and environmental carrying capacity had been reached (Thomas, 1973) as observed in other indigenous Carib populations such as the Ye'kuana (Arvelo de Jiménez, 1971). The census data provides evidence of the Pemon population sedentarization, growth and concentration. Indeed, demographic data presented for Canaima revealed a growth rate in the Pemon population of 4.6% over ten years, a rate much higher than the Gran Sabana Municipium as a whole, which covers the totality of the park area. Moreover the census shows a decrease in the number of small Pemon settlements (from 153 in 1982 to 80 in 1992) but an increase in the number of settlements with population concentration surpassing traditional patterns of less than 40 to 60 members (from 25 in 1982 to 34 in 1992). On the other hand there is an increase in the number of settlements with population concentrations above 300 (from 3 in 1982 ranging from 309 to 578 inhabitants to 8 in 1992 ranging from 300 to 879 inhabitants). The high-nucleated settlements are evident around missions (i.e., Kamarata and Kavanayan), tourism centers (i.e., Canaima), mining (i.e., Uriman) and service areas (see appendix 7.1). Other areas with increasing populations are settlements in which families have received land titles and have tourism attractions (i.e., San Francisco de

Yuruaní, San Rafael de Kamoiran and Paraitepuy de Roraima). All these settlements are most likely to experience destabilization of their conuco systems and its environmental consequences.

2. - Transfer of traditional ecological knowledge in regard to cultural ecological practices

Although not explored explicitly in this thesis the loss of traditional ecological knowledge (TEK) is an important factor in regulating and balancing exploitative pressure over ecosystems and supporting ecological stability (Ruddle, 1993). The permanence of TEK depends on the fact that specific skills are transmitted from generation to generation. This includes not only the transmission of sustainable resource management practices but also other knowledge that is fundamental for the reproduction of a society through its own social institutions. While resource managers have neglected the value of TEK for management, ethnographers have disregarded the study of the transmission of traditional knowledge in indigenous societies (Ruddle, 1993). Yet this transmission of knowledge is known to have its structure and process. This process includes tasks that are gender and age specific and are taught by members of the appropriate gender. Tasks are site specific and are taught in the types of locations where they are practiced. Specific times are determined for teaching and tasks are generally taught by parents (Ruddle, 1993).

The Kamaracoto attributes the loss of TEK to formal education in the school system run by the mission and with a criollo curriculum. In other words, there is a disruption in the Kamaracoto's institution of transference of knowledge. The young Kamaracoto spend much of their time during the year in school and do not spend much

time learning from their parents about traditional subsistence practices especially agricultural activities that are in cycles. Although both boys and girls do engage in subsistence activities as the census data shows, they are temporarily displaced during the school years from family economic activities and learning experiences during a critical instruction and learning period. A common concern is that the school courses prepare children for the criollo society and few skills are taught that help residents to stay and work in their homeland. In the late teens the young Kamaracoto are expected to have the basic skills to be able to be self-sufficient, build a family and carry on with the responsibilities expected within the domestic unit and extended family. More young Kamaracoto (especially males) find themselves without those skills. After high school there are no other continuing education opportunities locally and very few paid jobs opportunities exist besides tourism that is slowly becoming a central part of the Kamaracoto economy and sphere of exchange.

An example of the issue of ecological knowledge is a young Kamaracoto that was interviewed. Despite being criticized by his uncle, he opened a new conuco in a savanna forest fragment in the forest/savanna ecotone, which is more susceptible to fires and to the process of savannization. He had no concern whether the forest would recover after he left it for fallow. His only concern was the convenience to have the conuco close to his house in Kamarata, which was 25 minutes away. The issue was not the lack of primary forest elsewhere, but he held a paying job that required him to have his conuco close to Kamarata. An elder interpreted this action by the young Kamaracoto as “he does not know what he is doing.”

In a comparative note, statistical regression studies among Bolivian and Honduran indigenous groups show some evidence that regular schooling can increase farm income (without considering environmental externalities) and generally reduce old-growth clearance each year (but not always) (Godoy, Groff and O'Neil, 1998; Godoy and Contreras, In press). Godoy does not discuss the content or quality of either such education or the impacts that such education can have on the TEK and its environmental consequences in communities that may be dependent on the forest for their food security. Further research needs to explore in detail the Pemon TEK, how this is transmitted, whether it is being lost and how, and what are the social and environmental consequences of such a loss.

3. - Permanence of traditional lifestyle and the social structure of the domestic unit

Changes in the traditional Kamaracoto lifestyle and the social structure of the domestic unit of production and consumption have an impact in the conuco system that is not easily observed. Changes in lifestyle can lead to market integration ,and changes in social structure of the domestic unit can be a consequence of market integration through labor. Both types of changes can lead to significant social and environmental impacts.

Since the late 70's researchers from several fields have attempted to provide models or explanations of why indigenous peoples integrate into the market economy and what are the effects of markets on their use of natural resources (Alcorn, 1995; Colchester, 1989; Godoy, Brokaw and Wilkie,1995; Godoy, Wilkie and Franks, 1997; Gross et al., 1979; Durham, 1995; Santos et al., 1997). Indigenous people market integration has been explained as a result of encroachment and environmental constraints (Gross et al., 1979); government development policies (Santos et al., 1997); need for

western goods (Colchester, 1989); and modernization of economies that generate outside demands of local goods and development of job opportunities for locals (Godoy, Wilkie and Franks 1997). Yet it is not clear if these explanations are causes for indigenous market integration or the consequences of other factors that have lead to market integration. What is more clear are that impacts of market integration on indigenous societies which include increase in household income, stratification, labor exploitation, adoption of new values, disruption of local political and social structures, interference of local common property tenure and resource management systems, forest and wildlife resources depletion and conservation of forests.

In the case of the Kamaracoto, encroachment and contact with the Venezuelan society especially through indigenist and development governmental policies have had an impact in their traditional lifestyle. Changing lifestyles has to do with learning about and having access to western ideology, goods, technology and services. For the Kamaracoto this has been a long process since the contact with non-indigenous groups in the late 1800's through trade, resource extraction "booms" (i.e., balatá, diamond and gold), explorers, missions, formal education, rural housing programs, agriculture extension and contacts outside of their homeland. This is reflected in the change of clothing, the use of axes and machetes, firearms, outboard motors, new house architecture and materials, radios, medicine, bicycles, etc. In this case market integration is not seen as a result of environmental constraints but as a result of the impacts of contact with outsiders (indigenous and non-indigenous) and the adoption of outside goods to enhance the efficiency of their economy.

As Colchester (1989) points out indigenous people become dependent on these resources as soon as they become embedded in their economy. He explains that an increase in demand for outside goods means an increase in the need for indigenous peoples to produce traditional (i.e., crops, handcrafts) and/or non-traditional goods that can be exchanged in the market. Likewise, it can occur by participating in the labor market. The issue is that an indigenous society can change from being an autonomous self-sufficient subsistence economy to an economy that is susceptible and highly dependent in the market. This may result in both detrimental social (i.e., traditional social structure and beliefs) and environmental consequences even when indigenous people have control of their land if they do not have the time to gain experience to manage and secure control over social change. However, Colchester believes that patterns of change may or may not be disastrous depending on which aspects of the economy are modified and what aspects of the organization for production are modified to accommodate the economic changes. Colchester presents several cases of market integration with different impacts. For instance, the rubber trade among the Mundurucú in Brazil broke down their political and social organization at the village level as individuals and families dealt directly with rubber traders through a debt-peonage system and surpassing the traditional role of chiefs in trade. A similar process of undermining of traditional patterns of authority has been observed among the Panare, Warao and Ye'kuana groups in Venezuela. The Panare basketry trade in the 70's was an example of a moderate self-development initiative that was considered individualist but at the time was not believed to affect negatively the social make up of the Panare. Yet, it was not satisfying the increasing demands for western goods. A final example underlined by Colchester is the

Ye'kuana *Empresa Indígena* (Indigenous Enterprise) for cash crops developed since the late 50's. Designed as a cooperative and reflecting the social organization of the Ye'kuana, the *empresa* seemed to have been successful and controlled for the fragmentation effect of individualist trading. However, the increase in cash crop production lead to resource depletion nearby and the establishment of infrastructure did not allow the Ye'kuana to respond in traditional ways (divide the village and migrate).

A specific study on the impact of household market integration on deforestation, (Godoy, Wilkie and Franks, 1997) provides some evidence that integration through labor and or selling cash crops among Bolivian and Honduran Amerindians have different impacts on deforestation. Cash crops integration increases deforestation, labor integration have the opposite effect while a combination of both types of integration can produce nonlinear relations.

In another study on the impact of income on non-timber forest product (NTFP) among Nicaraguan Sumu Amerindians (Godoy, Brokaw and Wilkie, 1995), shows that residents in Sumu settlements located closer to mining areas tend to have higher incomes. As income rises, there is a decrease in the economic importance of NTFP in the household. Yet, at the same time the share of agriculture in household income increases as well as the extraction of timber for sale. Godoy concludes that his data seems to suggest that dependence on foraging resemble an inverted "U" shape. That is, low-income levels limit intensive foraging. As income increases, people can invest in resources to intensify foraging up to a point when income allows Sumu to farm more, increase their education and find jobs elsewhere. Godoy does not discuss the implications of agriculture intensification for deforestation as income raises or the impact of

increasing income in the social structure of households for production that may have environmental consequences.

For the Kamaracoto, the model shows cash crops and arts and crafts production and labor as the main forms of market integration. The first continuous forms of market integration in the Kamarata Valley started through Mission activities including a few job opportunities in construction, agriculture, cattle ranching and maintenance services. On the other hand, the Mission would buy from the Kamaracoto the surplus of conuco and household garden products and diamonds from mining. Jobs in the Mission were few and many of them were part-time jobs. Other labor opportunities rose from small mining exploitation in *bullas* and school teaching. More importantly are the increasing jobs in tourism (seasonal and full-time) since the creation of the park and the development of Canaima as a tourism camp in the 60's.

For the Pemon, market integration has resulted in an increase of household income in monetary terms, stratification of their society and changes in the social and economic organization of their domestic unit by displacement of household labor. Labor displacement creates labor scarcity in the household which is already a scarce resource in many Carib groups. Riviere explains that the political economy¹⁷³ of many Carib groups such as the Pemon is not the accumulation of material goods but the capacity of retaining and incorporating human resources into the household or community. He points out that scarcity within tropical forests is not so much an issue of natural resources than of labor

¹⁷³ Riviere (1983-1984) defines political economy as referring to ways in which, within a given society, the production and distribution of wealth are organized (p.350).

to exploit them. This fact he argues, explains the social practices of preference for settlement endogamy and uxorilocality to incorporate and retain people specially women.

The studies by Urbina (1982) and Cousins (1991) showed clearly the impacts of market integration in the traditional economic and social organization of the Pemon domestic unit as a result of government agriculture development programs and mining activities respectively. Both studies considered the history of the Pemon society as the context in which market oriented activities operate. Urbina observes the need of the domestic units to adapt to new conditions when family members are displaced from the domestic unit subsistence labor to paid jobs while at the same time stratifying the Arekuna society. Cousins, on the other hand, observed that paid jobs opportunities in mining undermined the authority of the elders affecting the relations of father-in-law and son-in-law and the post marital services of the latter which is key in the Pemon economic and social organization of the domestic unit (Urbina, 1983-84). Although, the link between changes in the socioeconomic organization of the Pemon and environmental degradation is not analyzed in these studies, Urbina foresees the potential breakdown of the Pemon socioeconomic structure.

This socioeconomic structure and the characteristics of the conuco system allow for certain flexibility for the male in the domestic unit to temporarily participate in paid jobs opportunities. For instance Thomas (1979) noted that a Pemon family can be sustained by its female members during 10 months of the year when the conucos only require weeding and harvesting given that they also fish or sell casabe when necessary. Moreover the female head of household with the support of other kin related females cares for the children. It is this flexibility of the male role in the subsistence economy of

the Pemon that allows for males to substitute traditional occupancies (hunting and fishing) for intermittent (2-3 months) mining and mission work.

Even though this might be the case, Cousins show that in Pemon communities integration into the mining economy resulted in shifting cultivation practices and other subsistence activities being literally eliminated or very much minimized. Cousins does not explain this phenomenon or the process that lead to a complete substitution of subsistence activities. Yet it is clear that as more time is being spent in non-traditional occupations, the conuco system tends to breakdown resulting in a process of forest degradation up until the conuco system is abandoned. In the case of mining deforestation continues with mining activities but in the case of tourism forest exploitation in the form of subsistence agriculture is minimized as the conuco system is abandoned.

6.1.4 Political economy and market integration through ecotourism

Among the market oriented economic activities taking place in the park, tourism (in the form of so-called ecotourism) plays an important role in the disruption of the socio/cultural stability of the Kamaracoto. The local ecotourism industry is linked to national and international operations and marketing efforts seeking to generate foreign tourist demand. The development and expansion of ecotourism in Venezuela is facilitated by a set of conditions. Both international and national organizations and institutions (environmental, business and academic) are promoting and pushing for ecotourism development agendas as conservation development strategies for protected areas and national economic plans in a time of world environmental concern and sustainable development. Venezuela which is highly dependent on oil exports historically has focused on tourism as an alternative for economic development especially in times of

economic crises or fluctuation of world oil prices. In the early 90's within the context of structural adjustments and a neoliberal economic agenda the Venezuelan government incorporated ecotourism within its development plans to capitalize into the competitive advantage of the natural and cultural resources south of the Orinoco. The development of this agenda has been handed to the private sector -because of its business, financial and marketing capacity- through government incentives for investment and development, and in the case of Canaima, by facilitating subsidized concessions. The Venezuelan government in its attempt to strengthen and enhance its capacity to manage its national parks received a World Bank loan to improve among other things the financial sustainability of the parks by generating their own revenues. The open bidding and private agreements with inbound tour operators with no fixed fees or royalties for concessions and the establishment of park visitation fees are mechanisms created by the National Park Service to accomplish financial sustainability and help to pay back the loan. Despite the various resource management agencies and institutions, this project continues without a comprehensive management and tourism development plan and without any mechanism to systematically monitor the direct and indirect impacts of ecotourism on the environment and host indigenous communities. These communities are being left alone as they integrate into the tourism superstructure and its development agenda without market economy training or skills. Further, they are not aware of the long term socio-cultural and environmental impacts and subsequent conflicts that will result from this process.

As it has been implemented, ecotourism generates two major related impacts in the Kamarata Valley:

- 1) It serves as a pull factor that concentrates population thus affecting size and population density (e.g., Las Malocas community that developed adjacent to the

Canaima resort and Kavak that is small but is growing and evolving as a tourism destination).

- 2) It integrates the Kamaracoto people into the market economy. It does this in three ways:
 - a) Tourism introduces wage labor that displaces labor from the domestic unit of production (i.e., the conuco system). Once this displacement takes place, the domestic unit compensates by extending the cultivation period, reducing the fallow period of old conucos, and/or enlarging the area of the conuco by cutting the adjacent forest, etc. Other compensatory strategies may include change in site selection so as to main close to the job, exploitation of forest fragments in the savanna or abandoning agriculture altogether. This last strategy leads to dependence on the extended family or on cash to buy crops from other producers.¹⁷⁴
 - b) Tourism introduces incentives for the production of cash crops, which can lead to an increase in the size of agriculture plots, or to clearing of more forest.
 - c) Tourism introduces incentives for the production of arts and crafts for the consumption by tourism operators and tourist camps.

Although not reflected in the conucos samples, there is a tendency in the valley of the destabilization of the conuco system due to market integration as observed by the Kamaracoto. Besides population concentration the Kamaracoto attribute the breakdown of conuco practices to the displacement of sons and more importantly of sons-in-law from the domestic unit, which affects the post marital service, particularly in agriculture responsibilities. This displacement is catalyzed by the need of cash for commodities among young Kamaracoto. In the Kamarata Valley ecotourism represents the only market economy activity that offers a diverse and relatively high paying jobs with very little training required.

¹⁷⁴ Household labor displacement and its burden on women and farm productivity has been observed in tourism service areas in Cacun and the Caribbean Coast (Leatherman, 1998; Daltabuit and Leatherman, 1998); the lobster industry in Honduras and Nicaragua (Dodds, 1998) and in the Bolivia's uplands which contributes also to the progressive loss of sustainable management practices and to deforestation (Painter, 1998).

6.1.5 Tourism development and future trends

Tourism in the Kamarata Valley is mainly a product of its history, the creation of the park and the promotion of the area by outsiders (e.g., gold diggers, bush pilots, explorers, missionaries, researchers, resource managers, tourism entrepreneurs and filmmakers). Also to a lesser extent a product of local initiatives who established the first *churuata* in Kavak to protect the valley from outside tour operators that were invading their land by landing in the savanna. Later on, the Kamaracoto themselves would engage in entrepreneurial efforts replicating experiences from other parts of the park based on their observations and own working experiences. Tourism in the valley then changed from being something inevitable to being a desired economic option for the Kamaracoto. They perceived tourism as a more reasonable economic activity than mining, not only because it is legal, but also because is more profitable (given that minerals are scarce) and less devastating both socially and environmentally.

The valley has become in the last sixteen years a major tourism attraction in the Canaima National Park given its natural monuments, cultural beauty and the variety of tourism products and experiences. This competitive advantage, in relation to other places in the Gran Sabana, is very attractive to regional, national and international tour operators and agencies. The image of the valley is the result of the systematic promotion and marketing effort by outbound and inbound tour operators worldwide and government ecotourism development promotional efforts.

This promotion is part of new economic agenda of the Venezuelan government that is highly dependent on oil. The government has played a central role as tourism planner and developer up to the 90's and has embraced ecotourism to diversify the

economy and improve the negative balance of payment in the travel accounts. More recently, ecotourism development in Venezuela has been left to the private sector, which has the organizational and financial capacity while the government creates the incentives for investments.

As a result, the promotion and access to tourist markets as well as the development of ecotourism tours, routes and circuits in Canaima National Park are driven and controlled by outsiders. This kind of development creates local dependency for the Kamaracotos since tourism constitutes for them a necessary source of income. Although some local people have actually gone outside the valley to establish partnership with tour operators, they still depend on outsiders to have access to tourist markets and other resources. Furthermore they receive a low percentage of the total tourism revenues, while absorbing most of the cost of the local multiple social, cultural and environmental impacts.

Tourism within the valley is expected to grow in terms of visitors, number of new competing local operators (microempresas) and the development of more infrastructure and services. This expected growth and positive attitudes toward tourism has given high expectations to the Kamaracoto that face few economic options within the park. The combination of these factors will make the communities increasingly dependent on tourism.

As ecotourism expands under the conditions observed in Kamarata and becomes central to the Kamaracoto economy it is highly likely that the socio-cultural stability of the Kamaracoto will be influenced. This in turn, will change the subsistence economy of the settlements (i.e., breakdown in shifting cultivation system) and generate further

environmental degradation (i.e., savannization through forest depletion). Concurrently more changes will occur in the cultural and structural makeup of the settlements, eventually becoming more dependent upon market forces, which are outside local control. These changes are expected to have a “boomerang effect” upon tourism activities in the valley. This means that the Kamarata Valley which was once a pristine ecotourism attraction will change into a mainstream attraction, less pristine and subsequently yielding fewer visitors and less revenues for the tourism operators and the communities. Inbound tour operators may move their business elsewhere and the resource managers (INPARQUES) and the people of the Kamarata Valley will be left to deal with the detrimental environmental and cultural consequences.

6.2 Recommendations

Based on these findings several recommendation follow:

1. *Ecotourism development needs regulation.* Overall, ecotourism is no different than other types of tourism in terms of human-environment interaction. If left unregulated, the natural propensity of profit maximization, the lack of coordination of the different sectors of the supply side of the industry and its internally unconstrained tendency to grow will unquestionably generate detrimental social and environmental effects within host destinations. Even the small scale, slow-paced development prescribed for ecotourism can generate significant negative impacts in sensitive natural and cultural destinations.

2. *International promotion of ecotourism as a homogenous conservation development model for protected areas and national economic plans should be avoided as it overlooks the particularities of the historical and current context of development of*

destinations. The development and impacts of ecotourism are place and context-specific which needs to be considered in a planning phase. Although there are aspects of ecotourism that can be generalized, still the outcomes of such experiences vary within countries and between countries depending on many variables. Each protected area has unique ecosystems with their own cycles and resiliency. Moreover not all Protected Areas deal with human populations within its boundaries or have the same human pressures. Ecotourism as practiced in protected areas, varies on factors such as the comparative advantage of the “attraction”, the scale and pace of development, the type of tourist, the kind of activities practiced, the level of local participation, levels of control in the planning and operation of tourism and levels of differential access to park resources. Each country has their own political, economic and social situation, with different philosophies and priorities for development and conservation. Each country has developed historically its own protected areas system with different motivations, long-term objectives and legislation. Many of these areas are managed differently across countries with one or multiple public and private institutions (with different agendas) making decisions about how resources are allocated and used, and with different management capabilities (funding, institutional organization, training and expertise).

3. Developing ecotourism (as a strategy) must be based on the cooperation of three sectors: parks and protected land management, tourism businesses, and rural or indigenous communities. Each sector responds to different agencies and groups of interest at different scales (international, national, regional and local) and each is object of a different “policy subsystem”¹⁷⁵ with little overlap. This means that in some cases the

¹⁷⁵ Healy, (1995) uses the definition by Sabatier (1988, p.131) who describes a policy subsystem as a system composed of “those actors from a variety of public and private organizations who are actively

agencies function at cross-purposes and in conflict (Healy, 1995). McKercher (1993) points out that tourism is a resource-dependent industry, and its sustainability depends on its ability to continue to access and use high quality natural resources. Therefore, the prime directive of the industry is not so much to sustain development but to sustain the resource base on which development depends. This requires addressing how disputes are resolved over conflicting and contested demands for the same set of resources.

4. The integrity of the park resources and the cultural survival of the Pemon people depends on a mixed economy in which ecotourism should play only a diversifying role. The success of the Pemon traditional economy is that it does not rely on one activity but maintains multiple complementary activities taking advantage of the availability of a diverse resource base and climate regime, in order to maintain a viable population.

Likewise the Pemon rely on cultural mechanisms to maintain a viable household social and economic organization as a basis for a traditional economy that is labor intensive. Ecotourism has the potential to erode this traditional economy specifically the Pemon agriculture system and with it their food security and an important aspect of their cultural identity. The Pemon need to strive to maintain a vital and active traditional economy and have ecotourism as an activity that adds value to their economy. In this way they can have access to cash to purchase needed commodities and at the same time warrant certain autonomy to respond to changing political economic conditions and market fluctuations.

5. In the case of the Pemon in Canaima a co-management type of arrangement should be explored that combines collective land titles within the concept of the park. The future of the Pemon as an ethnic group will depend on a secure access to the resource

concerned with a policy problem or issue.”

base of their traditional lands to maintain a mixed economy. A legal collective land title can assure the Pemon certain cultural control¹⁷⁶ and survival. Yet, land rights alone does not secure sustainability. Land titles implies the responsibility to manage large extensions of collectively held property. This is a great challenge that requires an institutional arrangement beyond the household, settlements and neighborhoods and that respects the Pemon's traditional political and economic autonomy and organization. This can be a common property type of arrangement that would need a legitimate political capacity to establish common objectives, agendas and a resource management plan. The communities would have to have the capacity to make decisions, raise funds and implement the plan.

Many Pemon believe that they benefit from the park because they feel protected from outsiders. On the other hand, given the limited capacity of the park service to manage Canaima, the park needs the support from the Pemon. Any co-management arrangement should strive to stabilize the conuco system, promote the conservation of agriculture habitats, and provide tourism market integration training for the Pemon. Moreover, the co-management arrangements result in legitimate management and land use plans, appropriate bidding procedures, land use change regulations, reasonable price structures for tourism operations, and the monitoring and mitigation of detrimental impacts. Portions of the money collected through park fees should support the development of this co-management arrangement. Through this partnership the Pemon to can be better positioned to negotiate with the tourism business and superstructure and to

¹⁷⁶ Cultural control is a system through which an ethnic group has the social capacity to decide to act upon its cultural elements (Bonfil Batalla, 1989). Cultural elements are all the components of a culture that are necessary to develop every social action: maintain the daily life, satisfy needs, define and resolve problems, formulate and try to fulfill aspirations. For the Pemon it means keeping the power of decision-making

manage the development agenda. Of course, this would require a change in the park service attitude towards the Pemon and their cultural-ecological practices. In other words, the Park Service needs to see the Pemon as an asset given that they are the main local stakeholders. If one of the park objectives is to protect the Pemon culture then the conuco system among other cultural elements should be considered a critical cultural resource for the park. Incentives should be established for the Pemon to maintain traditional conuco practices and achieve effective forest regeneration and maintaining the supply of cultivable lands.

A change of the Park Service attitudes can also be generated through multicultural training for the park service and acknowledgment of the acculturation processes being experienced by the Pemon.

A co-management arrangement could also be extended to the tourism business and local communities in host destinations. This arrangement could be part of the requirements to obtain an operation permit. In other words the tourism business need have a co-management plan developed with and agreed to by the local people in order to operate in the park. The implementation of the plan will need to be evaluated in a regular basis.

6. The number of concessions (and tourism centers) authorized by the national park must be capped and the granting of concessions must be guided by long-term conservation development objectives. As part of the concession procedures all inbound tour operators need to have multicultural training to increase their awareness of and sensitivity to Canaima's natural and cultural resources. Likewise, operators need to be

regarding autonomous and appropriated cultural elements, as well as processes of change that will affect their lives.

aware of the potential direct and indirect detrimental impacts of tourism, as well as, ways to optimize economic benefits by generating revenues while contributing to local development and mitigating social cultural and environmental conflicts.

7. State institutions and agencies with a stake in parks resources (CVG-Edelca, Indigenous Affairs, Ministry of Education, Ministry of the Environment, Tourism Corporation, INPARQUES, Gran Sabana Municipium, etc.) need to clarify their jurisdictions, to minimize overlapping responsibilities and conflicting agendas, programs and activities that operate at cross purpose generating social and environmental conflicts. For instance, Edelca and the Ministry of Education in cooperation with the local communities, need to incorporate into their environmental and bilingual education programs objectives and activities that can reinforce TEK as well as to prepare the Pemon to live sustainably. In addition, the different State institutions and agencies need to support indigenous communities self determination efforts and help establish coordinated and effective mechanisms to control access of outsiders to indigenous lands.

8. Increase public awareness of National Parks, Indigenous Peoples and Environmental Issues. The National Parks and Indigenous peoples culture are part of the Venezuelan natural and cultural resources that needs preservation. The environmental degradation in Canaima National Park that is linked to human impacts should be a major concern for the Venezuelan society as a whole. The Pemon people, given their circumstances, may not have the capacity to respond effectively to environmental degradation alone. This will require a society that needs to address publicly the issues by becoming aware, be involved and speak out to halt the degrading process of their natural and cultural heritage.

6.3 Future Studies

Future studies need to build upon and combine theoretical approaches that seek to explain both cultural and environmental change. Likewise there is a need to improve and refine the multi method approach in political ecology studies not only to be able to establish or nullify the linkages between the different scales of analysis but also to generate comparable data across case studies.

In the case of Canaima National Park, future studies using remote sensing techniques should provide an understanding of the extent of the forest and savanna land cover and its rate of change both in terms of savanna expansion and forest regeneration. Similarly, a longitudinal study is needed to monitor the demographics and population dynamic of the human groups inside and at the boundaries of the park to determine potential areas of environmental conflicts. Studies should also focus on assessing those areas well suited for the Pemón agriculture system and those prone to degradation based on GIS analysis of soils, climate, slopes, water availability, etc. This should include an assessment of the carrying capacity of Canaima to support a viable indigenous agriculture system in terms of the ratio of population to agriculture land availability.

The model proposed in this thesis needs to be tested comparing control sites and different sites with similar environmental conditions but with different market integration histories. The study should combine detailed local demographic, ethnographic, household economy, environmental and agriculture production data with regional spatial analysis through remote sensing. Studies in this area should adopt and extend participatory research approaches that can democratize environmental information and empower local

communities. In this way the Pemon can be more aware of environmental degradation processes so they can make informed decisions regarding ways of mitigating environmental problems and devise management and economic development alternatives in partnership with NGO's and or the State resource management agencies.

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APPENDIX

Appendix 3.1. Venezuela's Areas Under Special Management (ABRAE) 1993

<i>Management Category</i>	<i>Category</i>	<i>No. of Areas</i>	<i>Surface (Km2)</i>	<i>% Nat'l Territory</i>	<i>% of ABRAES</i>
Protection	National Parks	43	130,335	14.22%	19.83%
	National Monuments	40	69,191	7.55%	10.53%
	Wilderness Refuge	7	762	0.08%	0.12%
Protection through regulated use	Biosphere Reserves	2	96,025	10.48%	14.61%
	National Hydrological Reserves	13	17,386	1.90%	2.65%
	Wilderness Reserves	2	500	0.05%	0.08%
	Critical areas with treatment priority	7	35,991	3.93%	5.48%
	Protected Public works areas	13	0		0.00%
	Dam and water reservoir zones	2	70	0.01%	0.01%
	Environmental restoration and protection areas	2	6	0.00%	0.00%
	Protected zones	57	116,259	12.69%	17.69%
Productive objectives	Forest Reserves	10	113,279	12.36%	17.24%
	Forest areas under protection	39	33,879	3.70%	5.16%
	Special agricultural use areas	6	3,580	0.39%	0.54%
	Integrated development rural areas	7	39,848	4.35%	6.06%
	TOTAL	250	657,110	71.70%	100.00%
	National Territory		916,445		

Source: (MARNR, 1995).

Appendix 3.2. Evolution of Venezuela's National Park System 1937-1993

Presidential Period	National Park	Year of Creation	Location by State	Km2	Accum. Km2	% of Nat'l Territory
López Contreras	Henry Pittier	1937	Aragua Carabobo	1,078	1,078	0.12%
Marcos Pérez Jimenez	Sierra Nevada	1952	Mérida	2,765	3,843	0.30%
	Guatopo	1958	Barinas Miranda	1,225	5,067	0.13%
	El Avila	1958	Guárico Dtto. Federal Miranda	852	5,919	0.09%
Rómulo Betancourt	Yurubí	1960	Yaracuy	237	6,156	0.03%
	Canaima	1962	Bolívar	30,000	36,156	3.27%
	Yacambú	1962	Lara	146	36,302	0.02%
Raúl Leoni	Cueva de la Quebrada del Toro	1969	Falcón	85	36,387	0.01%
Rafael Caldera	Archipiélago Los Roques	1972	Central Litoral Coast	2,211	38,598	0.24%
	Macarao	1973	Miranda Dtto. Federal	150	38,748	0.02%
	Mochima	1973	Anzoátegui Sucre	949	39,697	0.10%
	Laguna de La Restinga	1974	Margarita Island	189	39,886	0.02%
	Médanos de Coro	1974	Falcón	913	40,799	0.10%
	Laguna de Tacarigua	1974	Miranda	391	41,190	0.04%
	Cerro El Copey	1974	Margarita Island	71	41,261	0.01%
	Aguaro-Guariquito	1974	Guárico	5,858	47,118	0.64%
Carlos Andrés Pérez	Morrocoy	1975	Falcón	321	47,439	0.04%
	El Guácharo	1976	Monagas Sucre	627	48,066	0.07%
	Terepaima	1978	Lara Portuguesa	190	48,256	0.02%
	Jaua-Sarisariñama	1978	Bolívar	3,300	51,556	0.36%
	Serranía de La Neblina	1978	Amazonas	13,600	65,156	1.48%
	Yapacana	1978	Amazonas	3,200	68,356	0.35%
	Duida Marahuaca	1978	Amazonas	2,100	70,456	0.23%
	Península de Paria	1978	Sucre	375	70,831	0.04%
	Sierra de Perijá	1978	Zulia	2,953	73,784	0.32%
	El Tamá	1978	Táchira	1,390	75,174	0.15%
Jaime Lusinchi	San Esteban	1987	Carabobo	435	75,609	0.05%
	Sierra de San Luis	1987	Falcón	200	75,809	0.02%
	Cinaruco-Capanaparo	1988	Apure	5,844	81,653	0.64%
	Guaramacal	1988	Trujillo	210	81,863	0.02%

Appendix 3.2. Evolution of Venezuela's National Park System 1937-1993
(continuation...)

National Park		Year of Creation	Location by State	Km2	Accum. Km2	% of Nat'l Territory
Carlos Andrés Pérez	Dinira	1989	Lara Trujillo	420	82,283	0.05%
	Páramos Batallón y La Negra	1989	Portuguesa Táchira	952	83,235	0.10%
	Chorro El Indio	1989	Mérida Táchira	108	83,343	0.01%
	Sierra de La Culata	1989	Mérida Trujillo	2,004	85,347	0.22%
	Cerro Saroche	1989	Lara	323	85,670	0.04%
	Turuépano	1991		600	86,270	0.07%
	Delta del Orinoco (Mariusas)	1991	Delta Amacuro	3,310	89,580	0.36%
	Ciénagas del Catatumbo	1991	Zulia	2,500	92,080	0.27%
	Parima-Tapirapeco	1991	Amazonas	34,200	126,280	3.73%
	Río Viejo	1992		956	127,235	0.10%
	Tirgua	1992		910	128,145	0.10%
	El Guache	1992		120	128,265	0.01%
	Tapo-Caparo	1993		2,050	130,315	0.22%
TOTAL				130,315		14.22%
National Territory				916,445		

Appendix 4.1. Population in Canaima National Park

Distrito PIAR Municipio Pedro Cova	Occupied		Occupied		Ethnic Group
	1982	House.	1992	House..	
Kamarata	578		879		111 PE/AK
Kavanayén (Sta. Teresita..)	371		651		87 PE/KA
Canaima (Kanaimö)	224		701		98 PE/NI/TN
Urimán	183		372		72 PE/NI
San José II (Unö'töi II) Unoktey San José de Unoktei	154		239		41 PE
Maikanden	123		7		1 PE
Kuana (Cristo Rey de...)	104		172		22 PE
Misión Vieja (Tereyén)	104				
Awaraparú (Awara Parúk Akanán) San Isidro de...	102		167		21 PE
Karimanparú (Wadauraparú)	82				
Santa Marta (Tuwaiwa'töi)	78		208		29 PE
Sarauraipa (San Miguel de...)	74		137		16 PE
Paruyapa (Parudapa)	73		48		9 PE
Wonkén (Wonken Vieja)	68		97		14 PE
La Isla Larga (Las Piñas)	45				
Wadetöi (Campo Carrao)	40		80		12 PE
Pino	35				
Karuaiken (San Francisco de Karwaiken)	34		54		7 PE
San Lorenzo	34				
San Antonio de Wopaimaden (Wopaimöden)	28				
Divina Pastora (Yumpatá) de Yunek	27		32		8 PE
Karinakón	26		39		6 PE
Keseraparú	23				
Kamawapa (Santa Teresita de...)	22		38		7 PE
Kanwaripatói	22				
Waikimpa	22				
Warmo	22		32		4 PE
Kararaparú (San Luis I)	21		29		7 PE
Korme (Colme)	21		15		4 PE
Kunorotopa (El Cartán)	21				
Peipa	21				
Aichakén (Boca de Hacha)	20				
La Ceiba II (Suada Tepuy)	20				
Perikema (Püürüküma)	20				
Tenurpa	20				
Salto Aräutaima (Arautaima merú)	19				
Tureme (Zamuro)	19				
Uruyén	19				
Iramata (San Pedro de Iraumata)	18		37		7 PE
Karipa	18				

Appendix 4.1 Population in Canaima National Park (continuation...)

Distrito PIAR Municipio Pedro Cova	Occupied		Occupied		Ethnic Group
	1982	House.	1992	House.	
Möroko	18				
Wonotä (Wonnota)	18		7		1 PE
Anonto (Anönte, San Antonio de...)	17		5		1
Edeimotá	17				
Karwatapa	17				
Korokoparapá (Koru-Parapa)	17		48		8 PE
Parámotá (Paranmota)	17		13		3 PE
Epopá (Santa Natalia de Kuruy)	16		6		1 PE
Kurechiken	16				
Paraumota	16				
Puerto Bello (Aruwameru)	16		13		4
Senkopiren	16				
Wipa	16				
Zapata	16				
Araparítá (San Rafael de...)	15		22		4 PE
Morichal	14				
Pemá	14				
Kukenán	13				
Kusarivara	12				
Chimatakén	11				
Chivichivi	11				
Kuaiparú	11				
Kuraipa (Soledad)	11				
Wapinao	11				
Ara Merú	10				
Arukuima (El Cigarrón)	10				
Avikara (Cachimbo)	10				
Chiwowupay (Santa Rosa II)	10				
Dauno (Isla del Caroní) La Isla...	10		36		3 PE
Ereukörimö	10				
Ipupaipún (San Francisco I)	10				
La Pinta (Kunötdöpan)	10				
Mawaiden (Navaiden)	10		37		9 PE
Santa Ana I	10				
Eretukén (San José de...)	9		13		6 PE
Uraikäden	9				
Aguas Verdes	8				
Anakarakén	8				
Chinaday (San Conrado)	8				
Chivatón	8		4		2 PE/GB
Cucurital (Awak)	8				
Kuarmaparú	8				

Appendix 4.1 Population in Canaima National Park (continuation...)

Distrito PIAR Municipio Pedro Cova	1982	Occupied House.	1992	Occupied House.	Ethnic Group
Lukēmota	8				
El Vigía	7				
Emurita	7				
Kuarmaparutá	7				
Kuriparutá	7				
Maitakén	7		7		1 PE
San Pedro de Turunpankén (San Pedro 1)	7		4		1 PE
Santo Domingo	7				
Awaratöi (San Francisco II)	6				
Itöbekén (Itoweken)	6		26		5 PE
Korokopatá	6				
Nureyimö (San Pedro de Mireyimo)	6		26		3
Salto El Mono (Iwarka merú)	6		51		7 PE
Waremeparú	6				
Unatey I (Una'töi I)	5		41		5 PE
Chimata	4				
Kormekén	4				
Müremay	4				
Kariakupa	2				
Ampotur			7		1 PE
Aukaman			8		3 PE/NI
Eretuman			10		1 PE
Irawanaimo			36		7 PE
Kaika-Poda (Punta Blanca)			129		23 PE
Kururpan			23		4 PE
Maruken (San Marcos de...)			19		3 PE
Meremaik			9		3 PE
Orak Meru			15		3 PE
Paipaicho			18		2 PE
Parudanupo (San Cristobal de...)			9		2 PE
Porukoma			14		3 PE
Purpurken (San José de...)			13		2 PE
San Manuel de Arata			13		2 PE
Santa María de Wonkén			379		47 PE/NI
Weyken			8		1 PE
Subtotal	3,589		0 5,103		754
Total of Settlements	101		54		

Appendix 4.1 Population in Canaima National Park (continuation...)

Distrito ROSCIO Municipio Urdaneta	Occupied		Occupied		Ethnic Group
	1982	House.	1992	House.	
San Francisco de Yuruani	309		601		79PE/AK/NI
San Rafael de Kamoirán (Wonpak Mota)	194		301		39PE/NI
Paraitepuy de Roraima	121		226		41PE
San José Tuaukén	102		105		20PE
Kapota (Kakotá)	98		17		5PE
Santa Cruz de Mapauri (Quebrada de Jaspe)	98		300		48PE/PT/NI/AK
San Ignacio de Yuruani	83		163		27PE/NI/WP
Santa Isabel de Uroy Uaray (Uroy Waray)	74		64		9PE
Monte Bello (Itewata)	65		125		19PE
Campo Alegre II (Karoypa Kupo) Koroikupá	57		52		11PE
Iwoken (Iworokén)	40		8		2PE
Kamakén (Vista Alegre de...)	39		120		19PE
San Juan de Kamoirán (Pedekpoda)	39		60		10PE
Maklámón (San Gregorio de Kukenán)	38				
Puerto San Rafael	33				
Karaukén (San Miguel de Caracol) Karaweta	32		115		23PE
San Gabriel de Iwo	32		34		4PE
U'matá	30				
Kanayeutá	29				
Paramán	29				
Pampatá Merú (Pampeta Meru)	25		183		33PE
Kamá (Kama Meru)	23		55		13PE
Puerto Polo (Antawa pay)	23				
Maru'watöi	22				
Makutá	19				
San Luis de Kukenán (Araikupayeta)	19				
Chimirimú	17				
Santa Ana II	16				
Kawateüy - Apoipo	15				
Wonoderapón	15				
Abarkey (San Luis II) San Luis de Awarakay	14		33		6PE
Agua Fria Ekoy Yeremepo (ököyeremüpö)	14		104		19PE
Altamira	13				
Punto Nuevo	13				
San José de Chinikén	13				
San Vicente de Turumatá (Turunmotá)	12				
Waiparimotá	12				
El Rincón	11				
Pei Merú	11				
Sta Rosa I (Atapay)	11				
Wanarú	11				
Rorokepay (San Pedro II)	10				

Appendix 4.1 Population in Canaima National Park (continuation...)

Distrito ROSCIO Municipio Urdaneta	1982	Occupied House.	1992	Occupied House.	Ethnic Group
San José de Kukenán (Ilaparú)	10				
Campo Grande I	9				
Chirimata	8				
Muratá	8				
Primók	8				
Riwo riwó (Apanwao I)	7		35		5 PE
El Pilon	6				
Santa Victoria	6				
Tatankén	3				
Tarotá (Torotá)	2		17		2 PE
Kurui-Weken (Fundo Santa Norca)			17		3 PE
Kurum Mota (San Antonio de Cocuy)			38		6 PE
Manikumata			3		1 PE
San Juan de Dios (Tereden)			97		16 PE
San Moises de Warama			118		23 PE
Subtotal	1,948	0	2,991	483	
Total of Settlements	52		26		

Summary table of the population in Canaima National Park

	PIAR District		Gran Sabana Municipium	
	1982		1992	
Population		3,589		5,103
Settlements		101		54
Houses		0		754
ROSCIO District				
	1982			
Population		1,948		2,991
Settlements		52		26
Houses		0		483
TOTAL				
Population		5,537		8,094
Settlements		153		80
Houses		0		1,237

Note: in 1982 two districts covered Canaima's population. In 1992 these districts were integrated into one large Municipium. The numbers of houses in the 1982 Census were not reported.

Appendix 4.2 Kamaracoto population composition by age and gender for different years.

Kamaracoto population composition by age and gender, 1961

Age	Both Sexes	% Tot. Pop.	Male No.	Fem. No.	% Males	% Tot. Pop	% Females	% Tot. Pop.	Sex Ratio
0-4	116	19.5	54	62	19.4	9.1	19.5	10.4	87.1
5-9	132	22.1	67	65	24.1	11.2	20.4	10.9	103.1
10-14	65	10.9	28	37	10.1	4.7	11.6	6.2	75.7
15-24	108	18.1	44	64	15.8	7.4	20.1	10.7	68.8
25-44	120	20.1	56	64	20.1	9.4	20.1	10.7	87.5
45-64	43	7.2	23	20	8.3	3.9	6.3	3.4	115.0
65+ yrs.	12	2.0	6	6	2.2	1.0	1.9	1.0	100.0
All Ages	596	100.0	278	318	100.0	46.6	100.0	53.4	87.4

Kamarata community population composition by age and gender, 1972

Age	Both Sexes	% Tot. Pop.	Male No.	Fem. No.	% Males	% Tot. Pop	% Females	% Tot. Pop.	Sex Ratio
0-5	82	27.5	45	37	29.4	15.1	25.5	12.4	121.6
6-10	60	20.1	26	34	17.0	8.7	23.4	11.4	76.5
11-15	29	9.7	17	12	11.1	5.7	8.3	4.0	141.7
16-20	27	9.1	16	11	10.5	5.4	7.6	3.7	145.5
21-25	23	7.7	11	12	7.2	3.7	8.3	4.0	91.7
26-30	15	5.0	8	7	5.2	2.7	4.8	2.3	114.3
31-35	16	5.4	10	6	6.5	3.4	4.1	2.0	166.7
36-40	16	5.4	5	11	3.3	1.7	7.6	3.7	45.5
41-45	9	3.0	6	3	3.9	2.0	2.1	1.0	200.0
46-50	6	2.0	3	3	2.0	1.0	2.1	1.0	100.0
51-55	4	1.3	1	3	0.7	0.3	2.1	1.0	33.3
56-60	6	2.0	2	4	1.3	0.7	2.8	1.3	50.0
61-65	5	1.7	3	2	2.0	1.0	1.4	0.7	150.0
66-70	0	0.0	0	0	0.0	0.0	0.0	0.0	0.0
71-75	0	0.0	0	0	0.0	0.0	0.0	0.0	0.0
76 + yrs.	0	0.0	0	0	0.0	0.0	0.0	0.0	0.0
All Ages	298	100.0	153	145	100.0	51.3	100.0	48.7	105.5

Appendix 4.2 Kamaracoto population composition by age and gender for different years (continuation...)

Kamarata community population composition by age and gender 1996

Age	Both Sexes	% Tot. Pop.	Male No.	Fem. No.	% Males	% Tot. Pop.	% Females	% Tot. Pop.	Sex Ratio
0-5	112	21.0	65	47	23.3	12.2	9.1	8.8	138.3
6-10	94	17.6	48	46	17.2	9.0	6.7	8.6	104.3
11-15	79	14.8	39	40	14.0	7.3	5.5	7.5	97.5
16-20	50	9.4	30	20	10.8	5.6	4.2	3.7	150.0
21-25	48	9.0	25	23	9.0	4.7	3.5	4.3	108.7
26-30	36	6.7	19	17	6.8	3.6	2.7	3.2	111.8
31-35	22	4.1	11	11	3.9	2.1	1.5	2.1	100.0
36-40	21	3.9	9	12	3.2	1.7	1.3	2.2	75.0
41-45	21	3.9	8	13	2.9	1.5	1.1	2.4	61.5
46-50	15	2.8	6	9	2.2	1.1	0.8	1.7	66.7
51-55	14	2.6	8	6	2.9	1.5	1.1	1.1	133.3
56-60	11	2.1	6	5	2.2	1.1	0.8	0.9	120.0
61-65	4	0.7	1	3	0.4	0.2	0.1	0.6	33.3
66-70	3	0.6	2	1	0.7	0.4	0.3	0.2	200.0
71-75	4	0.7	2	2	0.7	0.4	0.3	0.4	100.0
76 + yrs.	0	0.0	0	0	0.0	0.0	0.0	0.0	0.0
All ages	534	100.0	279	255	100.0	52.2	39.2	47.8	109.4

Appendix 5.1. Balance of Payment of Tourist Sector Vzla. 1962-96

	<i>Credit</i> <i>(Millions U.S\$)</i>	<i>Debit</i> <i>(Millions U.S\$)</i>	<i>Balance</i> <i>of Payment</i>	<i>Exchange Rate Bs./US\$</i>
1962	3.03	70.13	-67.1	3.35
1963	3.05	70.95	-67.9	3.35
1964	6	79	-73	4.5
1965	15	84	-69	4.5
1966	26	105	-79	4.5
1967	33	104	-71	4.5
1968	40	122	-82	4.5
1969	46	129	-83	4.5
1970	50	140	-90	4.5
1971	61	138	-77	4.5
1972	73	170	-97	4.4
1973	119	*	*	4.3
1974	174	*	*	4.3
1975	180	383	-203	4.3
1976	214	*	*	4.3
1977	261	*	*	4.3
1978	205.3	*	*	4.3
1979	265	1588	-1323	4.3
1980	243.4	199.2	44.2	4.3
1981	187.5	2372.5	-2185	4.3
1982	309.1	2924.5	-2615.4	4.3
1983	310	1073.3	-763.3	6
1984	357.7	1062.9	-705.2	7.5
1985	416.3	597	-180.7	7.5
1986	443.5	543.2	-99.7	7.5
1987	309	402	-93	14.5
1988	346.7	565	-218.3	14.5
1989	389	640	-251	34.7
1990	496	1023	-527	46.9
1991	510	1227	-717	56.8
1992	444	1428	-984	68.4
1993	599	2123	-1524	90.8
1994	540	1483	-943	148.5
1995	840	1874	-1034	176.8
1996	1000	2552	-1552	417.3

Note: *Missing. Credit: Amount of foreign exchange earned. Debit: Amount of money spent by resident's abroad.

Source: Statistical Abstracts of Latin America 1971-91. Anuario de Balanzas de Pago. Bco. Central de Venezuela 1984-1993

Appendix 5.2. Balance of Foreign Visitors to Venezuela and Venezuelan Traveling Abroad

	<i>Tourist Arrivals</i>	<i>Travel Abroad</i>	<i>Balance</i>
1970	116,962	140,104	-23,142
1971	226,145	159,527	66,618
1972	294,148	180,990	113,158
1973	453,331	208,772	244,559
1974	593,857	228,430	365,427
1975	436,182	292,823	143,359
1980	215,042	751,816	-536,774
1981	200,035	770,119	-570,084
1982	212,838	812,625	-599,787
1983	199,962	377,028	-177,066
1984	233,202	350,467	-117,265
1985	269,733	388,495	-118,762
1986	310,655	399,350	-88,695
1987	337,993	184,566	153,427
1988	272,743	197,408	75,335
1989	411,849	282,113	129,736
1990	422,266	308,715	113,551
1991	598,328	424,500	173,828
1992	445,613	450,999	-5,386
1993	396,141	477,037	-80,896
1994	428,811	462,934	-34,123
1995	596,676	534,430	62,246

Appendix 5.3. Market shares of key destinations in Bolivar State 1991-1995

	1991	% State	% Vzla.	1992	% State	% Vzla.	1993	% State	% Vzla.	1994	% State	% Vzla.	1995	% State	% Vzla.
G. Sabana Route	41,159	53	7	55,806	53	13	56,469	48	14	77,020	51	18	79,242	44	13
Canaima Lagoon	25,334	33	4	37,324	36	8	21,910	19	6	24,929	17	6	31,213	17	5
Kavak	11,427	15	2	11,861	11	3	12,031	10	3	8,475	6	2	12,314	7	2
Uruyen	0	0	0	0	0	0	0	0	0	0	0	0	1,028	1	0
Pto. Ordaz	0	0	0	0	0	0	14,640	12	4	32,889	22	8	47,393	26	8
Cd. Bolivar	0	0	0	0	0	0	12,522	11	3	6,175	4	1	6,155	3	1
Guir	0	0	0	14	0	0	180	0	0	614	0	0	1,030	1	0
Caura	0	0	0	22	0	0	272	0	0	621	0	0	606	0	0
El Pauji	0	0	0	0	0	0	97	0	0	264	0	0	110	0	0
Icabaru	0	0	0	0	0	0	306	0	0	36	0	0	15	0	0
Canaima NP*	77,920	100	13	104,991	100	24	90,410	76	23	110,424	73	26	123,797	69	21
Bolivar State	77,920	100	13	105,027	100	24	118,427	100	30	151,023	100	35	179,106	100	30
Venezuela	598,328		100	445,613		100	396,141		100	428,811		100	596,676		100

* Canaima N.P data is the sum of Gran Sabana, Canaima Lagoon, Kavak and Uruyen data

Appendix 5.4 TOURIST ARRIVALS IN VENEZUELA BY NATIONALITY 1986-1995

RANK	1986	1990	1995	COUNTRY	GNP/Cap 1997\$	Market Share										Growth Rate			
						1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	%Total	%Total	%Change	
1	1	1	1	UNITED STATES	28,740	70,562	76,772	104,745	103,689	118,504	120,483	98,141	100,029	106,053	144,926	22.7	22.6	24.3	67.9
2	2	2	2	HOLLAND	25,820	42,617	46,367	44,608	45,032	50,347	51,629	26,670	22,714	50,255	53,173	13.7	9.6	8.9	18.1
5	6	3	3	ITALY	20,120	18,256	19,862	24,443	26,479	32,479	36,045	34,342	37,323	29,269	52,898	5.9	6.2	8.9	42.1
4	3	4	4	TRINIDAD & TOBAGO	4,230	34,100	37,100	31,559	27,238	44,723	46,904	20,300	10,800	33,897	45,724	11.0	8.5	7.7	49.7
3	4	5	5	CANADA	19,290	35,928	39,090	28,785	29,321	41,530	47,079	30,251	13,176	33,858	45,030	11.6	7.9	7.5	57.3
8	5	6	6	GERMANY	28,260	9,587	10,430	16,084	27,506	39,569	46,126	37,513	27,830	25,055	42,225	3.1	7.5	7.1	64.4
9	9	7	7	FRANCE	26,050	9,503	10,340	22,713	16,169	20,656	31,320	18,467	19,971	19,908	28,349	3.1	3.9	4.8	69.1
7	7	8	8	SPAIN	14,510	11,546	12,562	17,218	18,356	24,917	31,771	26,232	30,306	20,447	28,179	3.7	4.8	4.7	73.8
6	8	9	9	COLOMBIA	2,280	13,102	14,266	5,862	13,323	23,237	37,611	28,115	15,762	14,758	20,653	4.2	4.4	3.5	77.4
10	10	10	10	ENGLAND	20,710	7,850	8,541	9,456	11,466	18,570	21,915	21,213	16,044	12,030	17,609	2.5	3.5	3.0	80.2
11	12	11	11	ARGENTINA	8,570	7,054	7,675	9,356	9,542	12,891	20,261	15,674	14,646	10,113	13,825	2.3	2.5	2.3	82.6
14	11	12	12	BRAZIL	4,720	4,222	4,593	5,627	8,289	13,009	14,557	12,487	12,722	7,447	12,009	1.4	2.5	2.0	84.6
13	13	13	13	SWITZERLAND	44,430	4,762	5,181	7,042	8,515	9,900	10,204	7,790	8,048	8,525	11,959	1.5	1.9	2.0	86.6
12	15	14	14	PORTUGAL	10,450	6,309	6,865	4,326	4,083	6,222	6,512	4,799	5,360	6,218	8,379	2.0	1.2	1.4	88.0
18	14	15	15	DOMINICAN REP.	1,670	2,749	2,991	2,993	4,858	6,540	7,632	5,765	5,981	4,201	7,038	0.9	1.2	1.2	89.2
15	16	16	16	MEXICO	3,680	3,751	4,081	3,926	4,850	6,213	7,005	6,657	7,644	4,779	7,027	1.2	1.2	1.2	90.3
16	17	17	17	PERU	2,460	3,733	4,061	3,366	4,303	6,002	7,442	6,689	6,801	4,476	6,234	1.2	1.1	1.0	91.4
21	19	18	18	AUSTRIA	27,980	1,592	1,732	2,711	3,520	4,902	5,088	4,288	3,891	3,581	5,404	0.5	0.9	0.9	92.3
17	18	19	19	CHILE	5,020	3,164	3,431	2,366	3,281	5,138	5,723	5,879	5,286	3,592	4,971	1.0	1.0	0.8	93.1
20	20	20	20	PANAMA	3,080	1,667	1,814	4,663	4,412	4,243	3,846	3,049	2,824	3,143	4,418	0.5	0.8	0.7	93.9
19	21	21	21	JAPAN	37,850	2,328	2,533	1,755	1,959	2,433	2,633	2,675	2,750	2,754	4,028	0.7	0.5	0.7	94.5
22	23	22	22	SWEDEN	26,220	1,273	1,385	1,545	1,706	1,796	1,718	1,543	1,575	1,775	2,372	0.4	0.3	0.4	94.9
23	22	23	23	ISRAEL	15,900	1,209	1,316	1,471	1,757	1,939	1,812	1,314	1,248	1,521	2,178	0.4	0.4	0.4	95.3
24	24	24	24	BARBADOS	466	507	507	2,582	1,554	1,463	1,327	641	1,074	918	1,556	0.2	0.3	0.3	95.6
25	25	25	25	REST OF AMERICA & CARIBBEAN	7,270	7,912	7,469	11,453	12,919	15,165	12,243	11,627	9,247	13,047	2.3	2.5	2.2	97.7	
26	26	26	26	REST OF EUROPA	3,600	3,916	4,060	5,310	5,310	7,907	10,644	6,970	5,730	5,256	7,500	1.2	1.5	1.3	99.0
27	27	27	27	REST OF ASIA	1,564	1,701	1,271	2,679	4,062	3,510	3,099	2,746	2,329	3,584	0.5	0.8	0.6	99.6	
28	28	28	28	AFRICA	239	260	256	197	197	571	446	1,076	717	422	710	0.1	0.1	0.1	99.7
29	29	29	29	OCEANIA	316	343	334	203	203	450	319	259	291	319	446	0.1	0.1	0.1	99.8
				MISSING DATA	346	377	351	799	1,401	1,581	1,472	1,225	665	1,225	0.1	0.3	0.2	304.9	
				TOTAL	310,665	338,004	372,743	411,849	524,533	598,328	445,613	396,141	428,811	596,676	100.0	100.0	100.0	68.8	

Source: DEX Y CORPOTURISMO

Appendix 5.5 Domestic and International tourists visits to the main tourist destinations in the Bolívar State

Destinations	1991			1992			1993			1994			1995		
	Domestic	Int'l	Total	Domestic	Int'l	Total	Domestic	Int'l	Total	Domestic	Int'l	Total	Domestic	Int'l	Total
Gran Sabana	39,960	1,199	41,159	53,197	2,609	55,806	52,999	3,470	56,469	62,838	14,182	77,020	64,064	15,178	79,242
Pro. Ordaz			0	0	0	0	4,454	10,186	14,640	6,056	26,833	32,889	29,663	17,730	47,393
Canaima	2,332	23,002	25,334	6,763	30,561	37,324	3,069	18,841	21,910	5,075	19,854	24,929	3,769	27,444	31,213
Kavak	0	11,427	11,427	0	11,861	11,861	0	12,031	12,031	0	8,475	8,475	179	12,135	12,314
Cd. Bolívar			0	0	0	0	470	12,052	12,522	4,153	2,022	6,175	4,942	1,213	6,155
Ybari			0	0	14	14	84	96	180	404	210	614	657	373	1,030
Urúyen	0	0	0	0	0	0	0	0	0	0	0	0	43	985	1,028
Caura	0	0	0	0	22	22	0	272	272	64	557	621	120	486	606
El Pauji	0	0	0	0	0	0	0	97	97	22	242	264		110	110
Icaburu	0	0	0	0	0	0	0	306	306	0	36	36		15	15
Canaima N.P	42,292	35,628	77,920	59,960	45,031	104,991	56,068	34,342	90,410	67,913	42,511	110,424	68,055	55,742	123,797
Bolívar State	42,292	35,628	77,920	59,960	45,067	105,027	61,076	57,351	118,427	78,612	72,411	151,023	103,437	75,669	179,106

Proportion of Domestic and Int'l tourists by destination and relative to overall Bolívar State visitation

Destinations	1991			1992			1993			1994			1995		
	Domestic	Int'l	% of State	Domestic	Int'l	% of State	Domestic	Int'l	% of State	Domestic	Int'l	% of State	Domestic	Int'l	% of State
Gran Sabana	97%	3%	53%	95%	5%	53%	94%	6%	48%	82%	18%	51%	81%	19%	44%
Pro. Ordaz			0%		0	0%	30%	70%	12%	18%	82%	22%	63%	37%	26%
Canaima	9%	91%	33%	18%	82%	36%	14%	86%	19%	20%	80%	17%	12%	88%	17%
Kavak	0	100%	15%	0	100%	11%	0	100%	10%	0%	100%	6%	1%	99%	7%
Cd. Bolívar			0%		0	0%	4%	96%	11%	67%	33%	4%	80%	20%	3%
Guri			0%		100%	0%	47%	53%	0%	66%	34%	0%	64%	36%	1%
Urúyen	0	0	0%	0	0	0%	0	0	0%	0%	0%	0%	4%	96%	1%
Caura	0	0	0%	0	100%	0%	0	100%	0%	10%	90%	0%	20%	80%	0%
El Pauji	0	0	0%	0	0	0%	0	100%	0%	8%	92%	0%	0%	100%	0%
Icaburu	0	0	0%	0	0	0%	0	100%	0%	0%	100%	0%	0%	100%	0%
Canaima N.P	54%	46%	100%	57%	43%	100%	62%	38%	76%	62%	38%	73%	55%	45%	69%
Bolívar State	54%	46%	100%	57%	43%	100%	52%	48%	100%	52%	48%	100%	58%	42%	100%

Appendix 5.6 Tourist Arrivals in Canaima by Nationality 1991-95

RANK	COUNTRY	Market Share %										CUM%				
		1991	1994	1995	1991	1992	1993	1994	1995	1991	1992	1993	1994	1995		
1	4	1 GERMANY	4,669	6,301	4,789	3,347	10,111	18.4	16.9	21.9	13.4	32.4	32.4			
2	2	2 SPAIN	4,192	7,259	3,420	4,331	4,685	16.5	19.4	15.6	17.4	15.0	47.4			
5	1	3 DOMESTIC (VZLA)	2,332	6,763	3,069	5,075	3,769	9.2	18.1	14.0	20.4	12.1	59.5			
12	9	4 JAPAN	139	392	342	551	3,468	0.5	1.1	1.6	2.2	11.1	70.6			
4	6	5 ENGLAND	3,708	4,863	2,430	2,358	3,102	14.6	13.0	11.1	9.5	9.9	80.5			
3	3	6 ITALY	4,176	6,526	3,191	3,356	1,997	16.5	17.5	14.6	13.5	6.4	86.9			
8	5	7 UNITED STATES	1,139	874	1,568	2,373	1,230	4.5	2.3	7.2	9.5	3.9	90.9			
13	15	8 HOLLAND	88	0	77	112	804	0.3	0.0	0.4	0.4	2.6	93.4			
7	8	9 FRANCE	1,423	1,410	752	732	523	5.6	3.8	3.4	2.9	1.7	95.1			
6	12	10 SWEDEN	1,946	1,147	503	340	254	7.7	3.1	2.3	1.4	0.8	95.9			
10	10	11 AUSTRIA	343	453	202	494	208	1.4	1.2	0.9	2.0	0.7	96.6			
		12 BELGIUM	0	0	0	0	131	0.0	0.0	0.0	0.0	0.4	97.0			
		13 PORTUGAL	0	0	0	0	117	0.0	0.0	0.0	0.0	0.4	97.4			
14	14	14 COLOMBIA	0	0	261	142	63	0.0	0.0	1.2	0.6	0.2	97.6			
9	11	15 DENMARK	900	1000	131	373	30	3.6	2.7	0.6	1.5	0.1	97.7			
11	7	CANADA	279	336	783	1,061	0	1.1	0.9	3.6	4.3	0.0	97.7			
13		MEXICO	0	0	392	284	0	0.0	0.0	1.8	1.1	0.0	97.7			
		LATINAMERICAN	0	0	0	0	177	0.0	0.0	0.0	0.0	0.6	98.3			
		OTHER FOREIGNERS	0	0	0	0	544	0.0	0.0	0.0	0.0	1.7	100.0			
		TOTAL	25,334	37,324	21,910	24,929	31,213	100.0	100.0	100.0	100.0	100.0	100.0			

Source: DIEX Y CORPOTURISMO; Direccion de Turismo del Edo. Bolivar 1995

Appendix 5.7. Tourist Arrivals in Kavak by Nationality 1991-95

		Market Share %												CUM%	
1991	1994	1995	COUNTRY	1991	1992	1993	1994	1995	1991	1992	1993	1994	1995	1995	1995
6	5	1	ENGLAND	3	5	412	812	4,651	0.0	0.0	3.4	9.6	37.8	37.8	
1	1	2	GERMANY	4,556	4,744	3,934	3,390	4,168	39.9	40.0	32.7	40.0	33.8	71.6	
2	4	3	SPAIN	3,424	3,554	3,787	813	1,647	30.0	30.0	31.5	9.6	13.4	85.0	
3	2	4	ITALY	2,283	2,372	2,525	1,860	833	20.0	20.0	21.0	21.9	6.8	91.8	
4	3	5	UNITED STATES	1,141	1,186	1,373	1,600	424	10.0	10.0	11.4	18.9	3.4	95.2	
		6	DOMESTIC (VZLA)	0	0	0	0	179					1.5	96.7	
5	6	7	CANADA	10	0	0	0	150	0.1	0.0	0.0	0.0	1.2	97.9	
		8	OTHER FOREIGNERS	0	0	0	0	262					2.1	100.0	
			TOTAL	11,417	11,861	12,031	8,475	12,314	100.0	100.0	100.0	100.0	100.0		

Source: DIEX Y CORPOTURISMO; Direccion de Turismo del Edo. Bolivar 1995

Appendix 5.8. Venezuela Adventure Tour Operators

Tour Operator	Headquarters	Region	Speciality
Cheesemans' Ecology Safaris	Saratoga, CA USA	Multiple Regions	
Exodus Adventure	London, England	Multiple Regions	
Explore Worldwide	Hants, England	Multiple Regions	
International Expeditions	Helena, AL USA	Multiple Regions	Natural and Cultural Expeditions
Journeys International	Ann Arbor, MI USA	Multiple Regions	
Lost World Adventures	Marietta, GA USA	Central and South America	Ecotourism Bird Watching Wildlife safaris Mountain biking Anthropology, etc
Mountain Travel/Sobek Expeditions	El Cerrito, CA USA	Multiple Regions	Natural History Trekking Nature Trips
New York Botanical Gardens	Bronx, NY USA	Multiple Regions	
Questers Worldwide Nature Tours	New York, NY USA	Multiple Regions	
Safaricentre International, Inc	Manhattan Beach, CA USA	Multiple Regions	Jungle Expeditions Trekking Bicycle Touring Bird Watching Fishing, etc.
Wilderness Travel	Berkeley, CA U.S	Multiple Regions	Jungle Expeditions Nature Trips Trekking Cultural and Natural history trips, etc.
Wildland Adventures	Seattle, WA 98155 U.S	Multiple Regions	
World Expeditions	Toronto, Ontario Canada	Multiple Regions	
Fourth Dimension Tours	Miami, FL USA	Multiple Regions	Ecotourism Jungle Expeditions Research Expeditions Bird Watching, etc.
Tread Lightly	Washington Depot, CT USA	Multiple Regions	Bird Watching Jungle Lodge Scuba/Snorkeling Research expeditions, etc.
Venezuela Ventures	Armonk, NY USA	Venezuela	Ecotourism Bird Watching Wilderness Lodge Nature trips Scuba/Snorkeling, etc.

Appendix 5.8. Venezuela Adventure Tour Operators (continuation...)

Experience the Adventure Tours, Inc	Miami, FL USA	Central and South America, and Caribbean	Cruises Ecological Expeditions Fishing/Flyfishing Scuba/Snorkeling Jungle Expeditions, etc.
LTA Tours/Tropical Adventures Travel	Seattle WA, USA	Venezuela	Ecotourism Jungle Expeditions Natures Trips Scuba/Snorkeling
Fishing International	Santa Rosa, CA USA	Multiple Regions	Fishing/Flyfishing
Rod and Reel Adventures	Copperopolis, CA USA	Multiple Regions	Fishing/Flyfishing
Southwind Adventures	Littleton, CO USA	South America	Nature Trips Trekking
Tropical Adventure Travel	Seattle, WA USA	Multiple Regions	Scuba/Snorkeling
Sol International	Miami, FL USA	Central and South America	Andean and Natural History
Eco Voyager, Inc.	Coral Gables, FL USA	Venezuela	Ecological Soft Adventures
Himalayan Travel Inc.	Stamford, CT USA	Multiple Regions	Trekking Mountaneering Jungle safaris Scuba/Snorkeling Archaeologic sites Yacht Cruises